Economics and Sociology
Occasional Paper No. 2166

EXPORTING FRESH FRUITS AND VEGETABLES TO EUROPE: POTENTIAL AND CONSTRAINTS FOR GAMBIAN PRODUCERS

by

Geetha Nagarajan

Richard L. Meyer

and

Douglas H. Graham

October 1994

Case Study prepared for the Bureau of Africa, Office of Sustainable Development, Division of Productive Sector Growth and the Environment
Agency for Internation Development, Washington, D.C.
Under the Project "Agribusiness Development in Sub-Saharan Africa,"
Contract No. DHR-5450-A-00-9084-00

Rural Finance Program
Department of Agricultural Economics
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210-1099

Acknowledgements

We deeply acknowledge the financial assistance provided by the Bureau of Africa, Office of Sustainable Development, Division of Productive Sector Growth and the Environment of the USAID/Washington, and the cooperation and encouragement extended by Garland Christopher, Ernest Gibson and Thomas Herlehy to conduct the studies included in this project.

The Ohio State research team depended on the generous cooperation of many people and institutions in The Gambia to successfully carry out this study. They include all those mentioned in the list of contacts provided at the end of this report. We want to recognize the outstanding cooperation of several other people who helped with the study. We are particularly grateful to Benjamin Carr, our local consultant, for his invaluable assistance in designing the study and facilitating the logistical operations throughout our stay in the country. The excellent interviewing skills of Isatoe Sawane, Amadou Cham, Lamin Manneh and Lamin Mansally helped us gather quality data. Thanks are due to the several horticultural entrepreneurs who contributed their valuable time and insights to understand the complexities of the horticultural sub-sector. The enthusiastic cooperation extended by osusu, kafo and village leaders, and horticultural traders facilitated a favorable environment to conduct the study.

Our study of European markets for fresh fruits and vegetables was facilitated by the excellent cooperation of Anthony Blaxsell and staff of Oakprime International Ltd.; Keith O. Sims, David Smith and Gary Carlton of J.O. Sims Ltd.; Geest International Ltd.; Stephen Jaffee of the World Bank; researchers at Abt. Associates, Washington, D.C.; and several wholesalers, retailers and supermarket managers in the UK.

We very much appreciate the outstanding cooperation of the staff and secretaries of the USAID Mission in The Gambia who helped us in too many ways to enumerate here. Director Bonnie Pounds was always available and encouraging at every stage of our work. Key staff members Cathy Linehart and Nancy McKay were valuable sources of professional counsel, steering us in the right direction. Most of all, we wish to thank Fred Witthans, a close colleague and rare professional, whose great knowledge became a valuable asset to our work as he guided us through many difficult challenges.

The cooperation and insights provided by our collaborators in the peri-urban economies research are very much appreciated. They include Peter D. Little and Catherine Dolan of the Institute of Development Anthropology, and Michael Roth and Philip DeCosse of the Land Tenure Center.

None of the above should be held responsible for the opinions presented here or possible errors that may remain.

TABLE OF CONTENTS

I. Introduction 1

II. Methodology 3

III. Analysis: Commodity and Financial Flows in the Horticultural Subsector 5
1. Producers 6
A. Commercial Farms 6
B. Cooperatives 7
C. Communal Gardens 8
a) Indigenous communal gardens: Kafos 8
b) NGO sponsored communal gardens 9
D. Individual Medium Sized Farms 10
E. Individual Small Farms 10
2. The Consumers 11
A. Domestic Consumers 11
a) Hotels and restaurants 11
b) Gambian exporters 12
B. Intra-regional Consumers 12
C. International Consumers 13
3. The Market Agents 13
A. Hotel Suppliers 14
B. Wholesalers 15
C. Retailers 16
4. Financial Agents 18
5. Insurance Agents 18
6. Communication and Information 19
7. Transport 19
A. Air-freight 19
a) REDCOAT 20
b) Commercial airlines 20
B. Sea-freight 21
8. GAMHOPE 21

IV. The Market Structure 22
1. The Channels and Market Technologies 22
2. Choice of Technology 23

V. The European Markets 25
1. The Market for Fresh Fruits and Vegetables in UK 25
A. The Demand for Fresh Fruits and Vegetables 26
B. Importation of Fresh Fruits and Vegetables 26

C. The Market Outlets . . . 26
D. Commodity and Financial Flows . . . 27
a) Commodity flows . . . 27
b) Financial flows . . . 29
E. Market Structure . . . 30
3. Summary . . . 34

VI. The Gambian Horticultural Subsector: Constraints and Potential to Serve Alternate Markets . . . 35
1. Potential . . . 35
2. Constraints . . . 36
A. Physical Constraints . . . 36
B. Research, Development and Extension Constraints . . . 36
C. Information Constraints . . . 37
D. Financial Constraints . . . 37
E. Insurance . . . 37
F. Government Support . . . 37
3. Lessons Learned from Other Developing Countries . . . 38
A. The Kenyan Horticultural Sector . . . 38
B. Costa Rica and the Windward Islands: Two Success Stories of Exporting Bananas to the UK . . . 40
a) Costa Rica . . . 40
b) Windward Islands . . . 41

VII. Summary and Policy Implications . . . 41
1. Summary: Potential and Constraints . . . 41
2. The Financial Dimension: Summary . . . 42
3. Policy Recommendations . . . 44

References . . . 46

List of Tables

Table 1. Value of Imports of Fresh Fruits and Vegetables by Selected European Countries and the World, 1985-1990. . . . 48
Table 2. Value of Exports of Fresh Fruits and Vegetables by Selected African Countries to European Countries, 1985-1988. . . . 48
Table 3. Share of Horticultural Sector in Total Agricultural Exports of The Gambia, 1984-1989. . . . 49
Table 4. Value and Volume of Fresh Fruits and Vegetables Exports to European Countries from The Gambia, 1990-1992. . . . 49
Table 5. Number of Tourists Visiting The Gambia, 1981-1993. . . . 50

Table 6. Roster of Participants Sampled and Interviewed from the Horticulture Subsector in The Gambia and UK. 51
Table 7. Area, Crops Grown, Activities and Source of Finance for Major Commercial Farm/Exporters in The Gambia. 52
Table 8. Classification of Large Commercial Farms by Type of Activities Performed. 54
Table 9. Type of Clients and Mode of Payment to Clients by Major Commercial Farm Exporters in The Gambia. 55
Table 10. Two Horticultural Cooperatives in The Gambia: Characteristics and Operational Features. 57
Table 11. Area and Number of Participants in Individual, Non-Donor and Donor Communal Gardens in The Gambia, 1991. 58
Table 12. Type of Suppliers, Expenditures and Mode of Payment for Fresh Fruits and Vegetables by Selected Hotels in The Gambia. 59
Table 13. Size of the Urban Markets and Sample for the Study. 60
Table 14. Contractual Relations of Retail Traders with Their Suppliers and Buyers. 61
Table 15. Characteristics of Informal Financial Markets for Retailers. 62
Table 16. Volume of Cargo Transported by Redcoat from The Gambia to UK, 1992-1993. 63
Table 17. Summary of Activities of Large Commercial Farms in The Gambia. 64
Table 18. Levels of Asset Specificity, Uncertainty, Access to Finance and Information and Market Technology Followed by Various Producers in the Horticultural Subsector. 65
Table 19. Total Volume and Value of UK Fresh Fruit and Vegetable Market, 1978-1988. 66
Table 20. Volume of Fresh Fruits and Vegetable Market in the UK and Per Capita Consumption of British Consumers, 1978-88. 66
Table 21. Domestic Consumption of Fruits and Vegetables in the UK, (kg/head/yr.), 1980-1988. 67
Table 22. Some Major Imported Fruits & Vegetables in the UK. 68
Table 23. Percentage Shares of Domestic Production and Imports in the Volume of Fresh Fruits and Vegetable Markets in the UK, 1978-1988. 68
Table 24. Size of the European Market for Fresh Fruits and Vegetables (Excluding Potatoes), 1983-1989. 69
Table 25. Percentage Shares of Fresh Fruits and Vegetable Sales in the UK by Outlet Type, 1978-1988. 69
Table 26. Organization Pattern and Potential of Various Types of Producers to Serve Alternate Markets. 70

List of Appendices

Appendix 1. Change in Shares of Different Sectors in Domestically Produced Exports in The Gambia, 1984-1989 74
Appendix 2. Specification for Yellow Honeydew Melon 75
Appendix 3. J.O. Sims Limited - Pesticide Policy 80
Appendix 4. Reference Price Application Periods 82
Appendix 5. Shares of Exporting Countries in EEC Imports of Fresh Vegetables, 1990 83
Appendix 6. Roster of Individuals and Institutions Consulted during Field Work on this Study 84

EXECUTIVE SUMMARY

This study, following a modified subsector framework, analyzed the horticultural subsector in The Gambia. It highlights a number of advantages and limitations that Gambian horticultural producers face in producing and servicing alternative markets, including European markets, for fresh fruits and vegetables. The Gambia offers a promising tropical climate, a high water table, and good soil texture in peri-urban Banjul. Relatively low cost labor, remarkably good tele-communications and close proximity to European markets reinforce the advantages that the natural resource potential offers to Gambian producers.

Nevertheless, serious constrains exist which will continue to control the pace of horticultural production and the country's potential to serve alternative markets such as in Europe. Physical infrastructure problems are very important along with inadequate and unreliable air and sea freight facilities. There is no public cold storage facility at the airport so the larger commercial farms have been induced to build their own facilities. Without these facilities, the risk of "tarmac spoilage" is high because of the irregular air cargo services. The demanding quality control requirements established in Europe make it increasingly difficult for The Gambia, especially for the smaller producers, to compete unless they have assured access to a cold chain marketing system.

There is an obvious lack of government support for research and extension for horticultural crops. The larger producers, in effect, finance their own research and ad-hoc experiments. They are influenced in part by their private overseas network of suppliers and buyers, and the advice of related family firms regarding seed varieties and cultivation practices. They also seek out information about marketing alternatives abroad.

Information constraints are serious for most producers, especially for small producers who have imperfect knowledge about European markets and non-Gambian competitors, new market niches, outlets, agents and prices. In addition, Gambian exporters must continually monitor changing product standards, labelling, and packaging requirements of the EEC countries to maintain their competitive edge. There is no better way to reduce these informational constraints than focussed trips to key European countries, but this is impossible except for the largest producers. The government and GAMHOPE, the horticultural producers and exporters association, could play an important role in furthering this process of learning by financing (in whole or in part) foreign trips by Gambian producers to attend marketing and packaging workshops and trade fairs in selected European countries. In addition, this would also help to obtain market information and build up networking contacts, and possible strategic business alliances and joint ventures.

The Financial Dimension

The mixture of opportunities and constraints outlined above has created a dual structure of horticultural producers/exporters in the country. On top are a handful of big operators who have largely self-financed their successful entry into European markets through earnings from

other business ventures or related family enterprises. These are the only producers that export to European markets on a sustained basis. Next are a mixture of medium to small producers, some of whom have sporadically exported to Europe, but not on a sustained basis. These producers currently produce for the hotel market in the tourist sector or as occasional outgrowers for the large producers/exporters. The smaller horticultural producers are supported in part through NGO programs, especially women's groups, and produce exclusively for the domestic wholesale, retail and hotel markets.

Financial support for the horticultural subsector is relatively straight forward and uncomplicated: self-finance and informal finance predominate. Start up investment costs are financed through equity (self) finance. This is logical because banks cannot be expected to place their depositor and stockholder funds at risk by issuing investment loans to untested businesses in an area as risky as horticultural exports. This role is better served by venture capital firms that make equity investments in risky enterprises, but also introduce production and management expertise. The largest horticultural enterprises are able to obtain conventional overdraft facilities to service part of their short-term operating expenses, but not for overseas shipments or investment projects. It is also important to note that the largest firms with established overseas networks and offshore banking relations can obtain offshore letters of credit to finance their shipments to Europe. It is also important to note that large producers and even medium sized operators, to greater or lesser extent, provide financing to the subsector by selling their produce on consignment in local as well as in export markets. In effect, they offer supplier credit to their buyers for one to four weeks before receiving payment. Ironically, therefore, producers have to finance much of their own production costs as well as other agents in the marketing channels.

Smaller producers necessarily rely on self-finance and to some extent use informal sources of finance. Supplier credit and sales on consignment are, however, much less common among these producers because they expect their buyers to pay in cash or barter. Cooperatives and NGO gardens get donor subsidies to start up or expand their operations, while indigenous kafo gardens draw on funds mobilized locally from kafo members.

In short, up to the present, formal financial sources within The Gambia have played only a minor role in financing the horticultural subsector. Only conventional overdraft facilities are available for traditional short-term financing for the largest producers. Less expensive off-shore financial centers in the UK provide the occasional letters of credit used to secure export shipments for those few producers with established overseas banking relationships. Start up and investment costs are financed largely through earnings from other business activities and accumulated retained earnings. Self-financing is even more pronounced for medium and small sized firms.

It is unrealistic to expect domestic commercial banks to assume the risks of financing the investment costs of horticultural exporters in The Gambia given the current uncertainty of returns for all but the largest producers. Even for the large producers, it is unlikely that domestic banks will move beyond their current conventional overdraft financing into project-

oriented term loans for which repayment would be subject to greater default risks. This is legitimately the area for venture capital from the owner-entrepreneurs themselves or joint ventures with foreign partners as in franchising. Franchising, joint ventures and strategic alliances with international firms may facilitate local exporters to obtain the necessary finance in addition to obtaining production, management, processing, and marketing technology needed to compete in European markets.

Policy Recommendations

Government initiatives could make useful contributions in the area of information and infrastructure investments. For example, the government in partnership with GAMHOPE could support trips by promising horticultural entrepreneurs to participate in trade fairs and marketing and packaging workshops offered in selected European countries. This would allow them to build up a network of contacts and identify potential marketing agents in Europe. At the same time the government could consider a joint venture to build or expand the planned cold storage facilities at the Banjul airport. This should be done only if private producers are willing to at least match government contributions so there is a commitment to manage it on a commercial basis.

The government should make an effort to more carefully document the flow of horticultural exports in a systematic and timely fashion. Currently, an accurate, comprehensive and up-date record of Gambian horticultural exports is not in place. This could facilitate the marketing agents knowledge of growing or shifting product markets as well as keeping public authorities informed on the progress of the country's non-traditional export efforts.

The nature of the trends in foreign markets require improvements in R&D efforts and the availability of quality seeds. The government can play an active role in supporting research efforts directed toward the development of crop varieties with longer shelf-life. This is especially important for London supermarkets that do not pack ice around the fresh produce. The Government can also lobby for Gambian exporters in European markets following the examples of Israel, South Africa, Morocco. Furthermore, impediments to exporters who prefer to engage in outgrower contracts should be removed and labor should be protected through minimum wages act and minimum safety requirements in commercial farms.

In summary, the success or failure of the new non-traditional horticultural export sector will rest on the entrepreneurial skills of the participants themselves. A dual market with the largest firms engaging in exports while medium to smaller firms servicing the hotel and domestic market in peri urban Banjul will likely continue its natural evolution into the foreseeable future. Successful export activities often depend on prior or parallel developments in domestic markets. Export enclaves may be difficult to sustain in the long run unless the producers are engaged in learning how to provide quality products for the domestic markets. Jaffee (1993) shows that the Kenyan export development was built upon many years of domestic market experience. The Gambian domestic market, however, is very thin. It does not require large farms that often

dump export rejects into local markets to meet its needs. It seems that it will take The Gambia a long time to develop its export potential by following the Kenyan example.

Equity capital (self-finance) will logically continue to predominate either individually or through joint ventures between local and foreign partners. Slow improvements in domestic financial markets suggest that foreign equity capital and loans will be crucial. NGO finance can make an important contribution to smaller NGO and kafo gardens but it is unlikely that these efforts will succeed in doing much more than improving nutrition and providing some marginal incomes to women. Realistically, local bank finance can only play a modest short-term working capital limited to the largest entrepreneurs through overdraft facilities. Investment finance in this risky area can only logically be serviced through self-finance, retained earnings, venture capital and joint initiatives such as franchising and strategic alliances.

Finally, The Gambia should focus on niche markets, ethic and seasonal, in European markets.

EXPORTING FRESH FRUITS AND VEGETABLES TO EUROPE: POTENTIAL AND CONSTRAINTS FOR GAMBIAN PRODUCERS

by

Geetha Nagarajan, Richard L. Meyer and Douglas H. Graham

I. Introduction

Growing consumer awareness about the nutritional value of fresh produce, coupled with an increase in population and per capita income, have increased the demand for fresh fruits and vegetables in several countries. Innovative developments in horticultural production and post harvest technologies combined with increased transport facilities and more liberal inter-regional trade policies have facilitated the movement of fresh fruits and vegetables from surplus to deficit regions of the world. Consequently, the value and volume of imports of fresh fruits and vegetables have increased in several countries, especially in European countries that are constrained by the seasonality of production due to their temperate climate (Table 1). Several African countries have become major exporters to the EC countries. Table 2 shows the evolution of exports from South Africa and Morocco, the two major exporters of fresh fruits and vegetables from Africa to Europe.

The government of The Gambia (GOTG) has identified the horticultural sector as an important non-traditional export sector. Although efforts to improve the horticultural sector were undertaken by the government in the early 1970s, it was not until the late 1980s that they gained momentum and emerged as a priority sector. Policies that have been introduced since 1986 include the exemption of horticultural producers/exporters from income and export taxes, and fairly easy access to on land ownership rights. This has created a favorable environment for foreign and domestic investors in the Gambian horticultural industry. As a result, the share of horticultural products in total agricultural exports has increased from a mere 0.2% in 1984/85 to 9.1% in 1988/89, and has been increasing steadily (Table 3).[1] A total of 2,236 metric tons of fresh fruits and vegetables were exported in 1991/92 for a value of 1.68 million US dollars. This represented an increase of 28 and 33 percent, respectively, in quantity and value from 1990/91 (Table 4). In addition, nearly 85 percent of the requirements for fresh fruits and vegetables for the growing tourist population in The Gambia have been successfully met by the

[1] The share of the horticultural sub-sector in total agricultural exports has increased from 0.2 to 9.1%, while that of the traditional groundnut and groundnut products has declined from 80 to 56% over the period 1984-89 (Appendix 1). This indicates a shift in the importance of sub-sectors in the country. Groundnuts have been a primary export crop of The Gambia.

horticultural sector. It has been estimated that a total of 71,000 tourists visited the Gambia in 1992-93 (Table 5).[2]

The agricultural sector, primarily groundnuts, accounted for over 50 percent of total employment in The Gambia until the mid 1980s. Of late, the production and exportation of non-traditional crops including fresh fruits and vegetables has made the horticultural sector an important employer of agricultural laborers. Nearly 60 percent of the total women farmers are estimated to be engaged in individual and communal horticultural activities (NASS, 1992). In addition, large commercial horticultural farms currently employ nearly 4,100 laborers, of which less than 2,000 are permanent, to produce primarily for export markets, and to a lesser extent, for intra-regional and domestic markets (OSU survey, 1993).

It is believed that there is potential for the horticultural sector to expand, become a major foreign exchange earner and provide year round employment for more agricultural workers. Since the majority of the horticultural operations involve women laborers, increased employment and income would have a favorable distributional effect. The tropical climate, a high water table in greater Banjul and peri-urban areas, good soil texture, abundant land, proximity to European markets, good telecommunication systems, and the availability of low cost labor should facilitate the production of horticultural crops at low cost and allow producers to be competitive in international markets, especially in European winter markets. There are currently large and medium commercial farms, communal gardens, cooperatives and small individual farmers that engage in horticultural production in the peri-urban area around Banjul. With relaxation of the Common Agricultural Policy (CAP) in Europe by the European Economic Community and the increasing demand for fresh fruits and vegetables in European countries, opportunities exist for The Gambia to compete for a share of the European markets. However, there are several institutional constraints that limit realization of this favorable scenario. The lack of good public sector agricultural research and extension services to develop and disseminate technical details about production and post-harvest methods for horticultural producers is a serious supply side constraint. At the same time, storage and packaging facilities are deficient and there is a general lack of awareness and inability to meet quality requirements of the European markets by all but the largest Gambian producers. In general, there is a lack of information about prices and buyers in the European markets, a serious lack of governmental lobbying support for Gambian producers/exporters in European markets along with inadequate air-cargo services and public cold storage facilities. Furthermore, domestic financial markets are inefficient and cheaper off-shore financing is seldom available to finance horticultural production and exports.

This paper examines the current structure and performance of The Gambian horticultural sector. The potential and constraints faced by the sector in exporting to European markets are explored in detail. Table 4 indicates that several European countries including Belgium,

---

[2] On the average, the tourists stayed for a period of 12 days and the average amount reportedly spent by them on food accounted for $75 per head during their stay (Ministry of Industry and Commerce, The Gambia).

Germany, Holland, Sweden, France, Norway and the United Kingdom import fresh fruits and vegetables from The Gambia. However, the United Kingdom imports nearly 96 percent of the Gambian horticultural produce accounting for 95 percent of Gambian horticultural export revenues. Since most current exports go to the UK, the paper will concentrate on analyzing the potential and constraints relative to that market. The objectives of the paper are as follows:

- Document the current status of the horticultural sector in The Gambia in terms of participants at various levels and examine their potential to meet the demand for domestic, intra-regional and export markets;

- Examine the types and determinants of various production and marketing technologies and contractual arrangements followed by the heterogenous agents in The Gambia;

- Identify the potential and constraints for Gambian exporters to succeed in alternate markets, especially the UK;

- Provide recommendations for improving Gambian exports of fresh fruits and vegetables.

This paper is organized as follows: after describing the methodology, a description will be provided of the flow of commodities and finance through various agents in the Gambian horticultural subsector. This will be followed by a profile of the structure of the horticultural subsector and a discussion about problems faced by producers/exporters. A brief description of the size and structure of the UK market and future developments in European markets followed by experiences of Kenya, Costa Rica and Windward Islands in exporting horticultural products to UK will be provided to derive implications for Gambian producers/exporters. Policy implications and recommendations are presented at the end of the paper.

II. Methodology

The flow of commodities from production to final consumption in the horticultural subsector involves several participants at various stages and in several channels. The commodity flow is also interrelated with financial and informational flows that eventually shape the market technology followed by agents in these various channels. The framework employed in this study follows the traditional subsector approach developed by researchers at the Michigan State University for examining the participants at various levels of a subsector. But, it is modified to consider financial markets and market research and information as an integral part of the subsector rather than simply as part of the environment within which the subsector operates. Information is analyzed about how participants in the subsector resolve problems concerning access to finance and information. Therefore, this modified subsector framework allows us to

discuss the financial and informational flows that accompany the physical commodity flows in a subsector.[3]

The methodology employed included the following key elements:

- identification of the size, functions and type of formal and informal market channels found in the horticulture subsector along with the principal participants involved in the diverse channels;

- identification of the coordinating mechanisms used in terms of market technology/mechanisms and related contract terms and conditions that link the heterogenous participants within the channels in a given market and with related markets including finance, insurance, transport and communication;

- collection of quantitative and qualitative data through an examination of official records, field interviews with sector participants at various levels in several markets using systematic sampling procedures, and the direct observation of key operations; and

- examination of the competitiveness among and coordination within various channels as affected by efficiencies in several related markets to assess the implications of potential changes in inter and intra-channel relationships.

Table 6 presents the composition and size of the sample of subsector participants interviewed at all stages in the horticultural subsector. The data were collected during February-April 1993. The majority of the fruits and vegetables marketed domestically and internationally are produced in the urban and peri-urban areas of The Gambia. Therefore, the sample for the study was drawn from urban Banjul, Bakau and Serrakunda, and peri-urban Brikama, Sanyang, Pirang, Sinchu-Alhaji, Sinchu-Baliya and Sukuta.[4] The sample size at each level was dictated largely by logistical reasons. While the majority of commercial producers, cooperatives, hotels and restaurants, and telecommunication agents in The Gambia were interviewed due to their small number, a stratified random sampling procedure was followed to select the communal and individual producers and marking agents. To assess the constraints faced by and potential for

---

[3] See Nagarajan and Meyer, 1993 for details about the traditional sub-sector framework, examples of its application and the nature of our modified approach.

[4] Aspects of this research were integrated with the peri-urban study also undertaken by OSU. See Roth (1993) for an explanation for the choice of villages included in the peri-urban study.

Gambian exporters/producers in UK market, a purposive sample of an importer/distributor, a wholesale market, an ethnic market and two supermarkets was selected for study in London.[5]

Some of the information needed for this study may be considered sensitive, especially for private entrepreneurs involved in exporting. Therefore, data were collected using the rapid appraisal approach rather than through the application of a long structured questionnaire to gather information from commercial horticultural producers, and financial and communication agents.[6] Qualitative data and a limited amount of quantitative data were collected through informal interviews about the nature of the operations, number and type of clients, sources of finance, type of competitors, and major constraints faced by the respondents. The market vendors (retail and wholesale), some individual producers, and informal financial groups such as RoSCAs were willing to reveal relatively more information about their operations. Therefore, a structured questionnaire was used to gather quantitative information from them. Information was also gathered about the entire subsector through direct observations.

Official documents and statements were consulted to gather information regarding the aggregate level of horticultural production in the country. There is little data available in The Gambia, however, about the details of the importance and size of the horticultural subsector, and the value and volume of horticultural exports. The collection of data about the horticultural sector began only in 1991 as part of the regular nationwide survey on agricultural activities. It was discontinued, however, in 1993. Furthermore, since the majority of products are exported by private entrepreneurs through private airlines, accurate records are not maintained by the customs department on the volume of exports. The limited data that are available are often incomplete with internal discrepancies and are out of date. This report pieces together the fragmented information provided by the official agencies.

III. Analysis: Commodity and Financial Flows in the Horticultural Subsector

Although the horticultural subsector is considered to be a priority sector by the GOTG, little official documentation exists about the participants, the magnitude of their operations, and commodity and financial flows. This section, based on our research, attempts to fill that void. Figure 1 presents a schematic diagram about the flow of products and finance through various agents/participants in the horticultural subsector. The participants include a variety of producers, consumers, agents who provide marketing, financial, insurance, transport and communication

---

[5] Subsequently, a meeting was held in Washington to share these research findings about European markets with researchers from Development Alternative Inc., who are conducting a general marketing study. It led to a general consensus which is reflected in the findings reported here.

[6] The rapid appraisal approach is an approach that uses informal interview techniques to quickly gather information about the general features of the subject examined. See Holtzman (1993) for details.

communication services, and a supporting institution, GAMHOPE. Reference will be made to this flow diagram throughout this report.

1. Producers

Fruits and vegetable gardening have always been an integral part of Gambian life, especially for women. Women have traditionally worked in communal or individual gardens primarily to supplement household diets and, to a lesser extent, to sell their surplus in local markets. With the recent liberalization of the economy and the increased demand for fresh produce in domestic and international markets, several private entrepreneurs have entered into commercial horticultural production. Furthermore, several NGOs actively sponsored communal gardens to promote income generation activities in rural and peri-urban areas, and many are targeted at women producers. As a result, horticultural production has expanded in the past decade to include heterogenous producers ranging from small indigenous communal and individual farmers to commercialized large producers and cooperatives.

A. Commercial Farms

The GOTG has identified the horticultural sector as a potential subsector for earning more foreign exchange and creating additional employment. Therefore, it has encouraged private entrepreneurs to set up large commercial farms to produce for export markets. With the increased accessibility to subsidized small enterprise credit from the Gambia Commercial and Development Bank (GCDB) in the early 1980s, several Gambians invested in small and medium scale industries. However, several factors led to the failure of several of these investments and some of the entrepreneurs shifted to farming leading to the emergence of large commercial farms. Furthermore, favorable macroeconomic policies and an improved production environment encouraged a few foreign nationals to invest in commercial farming in the country. As a result, there are more than a dozen larger farms that are currently active in the commercial production of fruits and vegetables.

Table 7 presents the area, crops grown and activities of the major commercial farmers at the time they were interviewed. The majority of farms were started in the mid to late 1980s and are primarily located in the peri-urban areas surrounding greater Banjul. A total of approximately 1,070 hectares was owned by these commercial producers that together employed about 4,100 laborers (of which less than 2,000 were permanent laborers). The operational farm sizes ranged from 400 to 3.5 hectares with an average of 95 hectares. Seldom did these farms specialize in a single crop but rather produced a wide variety of crops. The major crops grown included Asian, African and European vegetables to supply the domestic, intra-regional and international markets.[7] The majority of farms performed several activities including production,

---

[7] Asian vegetables include okra, brinjals, bittermelons (karila), ribbed melons, chillies, spinach, cluster beans etc. African vegetables include bitter tomatoes, spinach, hot peppers, palm fruits, etc. European vegetables include carrots, cabbage, cauliflower, lettuce, potatoes,

marketing and exporting rather than specializing in just one activity. Self financing was the primary source of capital to meet both start-up and operational costs. Financing through domestic and off-shore banks was limited to only those farms owned by foreign nationals who had established banking reputations through their earlier business transactions overseas.

The majority of farms produced all the commodities that they traded. They directly sold their produce in domestic and international markets. Some farms including FARABA, Niamina, YAMS and TAMBATO also functioned as outgrowers to other larger commercial farms. Furthermore, one farm, GHE, did not have any own production but procured all its export products from outgrowers (table 8).

The type of clients to which these commercial farms sold their production and the mode of payment used are diagramed in figure 1 and described in table 9. Domestic clients include local markets, hotel suppliers, other commercial farms, hotels and restaurants while foreign markets include the UK, Germany, Holland, etc. Intra-regional trade among neighboring countries, especially Senegal, was also observed.

The majority of farms use equity finance (self finance) to cover operating, shipping and freight costs since credit has been negligible from domestic and off-shore banks. At the same time, the majority of clients, including local hotels and European importers, require supplier credit from these farms in the form of delayed payments for produce supplied. Immediate cash payment was observed only when individual local customers purchased fresh produce in local spot markets.

Few farms fixed the prices for their products; rather prices were usually negotiable between buyers and sellers. Some of the commercial producers have established contacts in international markets through family connections and agents who specifically lobby for and consummate transactions on their behalf.[8] However, the majority of farms do not have established links with specific agents or clients in either domestic or foreign markets. Therefore, they sell to several buyers largely based on prices offered by the buyers.

B. Cooperatives

The current horticultural cooperatives were started in the early eighties by the Gambia Cooperative Union (GCU), a government parastatal, as Cooperative Thrift and Credit Societies (CTCS) for women growers. However, these CTCS became cooperative societies in 1989 after

---

tomatoes, french beans, etc. Tropical fruits such as melons, mangoes, papayas, bananas, citrus, and avocados were also grown on these farms.

[8] Indeed, those farms (invariably owned by foreign nationals) with established contacts in both domestic and international markets have better bargaining power and competitive edge over new farms that are typically owned by Gambian nationals.

their divesture from a reorganized and privatized GCU. Currently, there are three cooperative societies registered under the cooperatives' act and managed by the Women's Horticultural Cooperatives (HCO).

The characteristics and operational features of two horticultural cooperatives, Bakau and Lamin, are presented in Table 10. Until 1990, the gardens were sponsored by the Norwegian government which provided the land and made grants in the form of seeds, implements and plant protection materials. In addition, the UNDP, the U.S. Embassy, and the British High Commission also provided financial assistance to fence the gardens and dig wells. The members are primarily women and were selected based on their previous performance with the CTCS and recommendations of respected CTCS members. The HCO supervises and coordinates the activities of these cooperatives. However, decisions on cropping schemes and marketing are made in each cooperative by a democratically elected committee made up of seven executive members, one farm manager and two marketing representatives. Each member of the cooperative is allotted an equal number and size of vegetable beds on a lottery basis to grow crops that are decided by the executive committee. Technical assistance on production practices is provided by the agricultural department of the GOTG. While the Norwegian government provided grants in terms of inputs until 1990, the members are currently required to pay a levy to procure inputs for their plots. However, the inputs are supplied at a subsidized rate by the HCO through a grant by the Norwegian government.

The total crop produced by the cooperative members is sold in local markets through a wholesale agent.[9] This agent purchases the produce on a consignment basis and pays the cooperatives after it is completely sold. It was reported that the wholesale agent paid them two to three weeks after the sales. The proceeds of the sale are divided among the members based on their contribution to the quantity sold. Recently, the Lamin cooperative has also functioned as an outgrower for a large commercial farmer/exporter. The cooperative provided the commercial farmers with two week suppliers' credit for the produce delivered.

C. Communal Gardens

The communal gardens include indigenous gardens that were sponsored and operated by the villagers, and gardens that were sponsored by NGOs but operated by the villagers.

a) Indigenous communal gardens: Kafos

Indigenous communal gardens called kafos are commonly found among farming communities in The Gambia. These kafos are cohesive units that are usually homogenous in

---

[9] Previously, the produce was sold by each member in local markets but this did not prove profitable. Therefore, they decided to collectively sell their produce to a wholesaler in the local market and also to an exporter. The proceeds are then divided among members based on their volume of production.

terms of geographic proximity, gender, age, ethnicity and occupation but with varying membership sizes. They perform several functions including insurance, financial intermediation, labor mobilization and socio-political activities.[10] The kafos that operate communal gardens generally perform insurance functions through mutual aid. The garden, fences and wells are collectively owned by the kafo, but members are allotted individual plots and are free to choose their own cropping schemes and quantity to be marketed. The individual members, however, are required to contribute a fixed amount to a common kafo fund from the proceeds of their produce grown in the kafo garden . The common fund is used to mitigate aggregate kafo level risks such as drought, fire, etc. and, to a lesser extent, member level contingencies such as funerals, medical expenses, etc. In general, each village was observed to have at least one kafo garden that is usually operated by women. A survey conducted by NASS revealed the existence of about 985 kafo gardens that cover approximately 287 hectares of land with a reported 21,678 participants. The vegetables produced in these gardens are often consumed by the members and 58 percent were sold in local spot markets (Table 11).

Our interviews revealed that the operating costs of the gardens are usually self financed, although a limited amount of common funds are lent to deserving individual members at interest rates decided by a committee. The produce sold in local spot markets involved a down payment or barter transactions. This indicates that these kafo gardens are primarily formed to function as mutual aid associations and to supplement the dietary needs of the members, and not for commercial purposes. This is also reflected in the decision making which rests with individual members. These features constrain the kafos from becoming potential exporters or outgrowers to exporters or reliable suppliers to local markets.

b) NGO sponsored communal gardens

NGOs became active participants in village level community development activities in the early 1980s by sponsoring several gardens in rural and peri-urban areas to improve the nutritional level of communities and promote income generating activities, especially for women. Currently, there are about five NGOs including Caritas, Action Aid, Save the Children, and three international agencies, including the U.S. Embassy and the EEC, that actively sponsor communal gardens. NGOs generally provide the garden land, fence it and dig wells.[11] Later, the members collectively own the land, fences and wells provided by these NGOs. But each member is allotted a fixed number of beds to grow vegetables and each can decide on cropping schemes and marketing outlets. A NASS survey conducted in 1991 by the Government of The Gambia estimated the existence of at least 115 donor sponsored gardens covering 201 hectares

---

[10] See Nagarajan, Graham and Meyer, 1994a for details.

[11] The lands were previously owned by the village. The NGOs need to get the permission of the village leader (alkalo) to allocate land for the garden. In some villages, the NGOs were required to pay a certain amount to the village leader to get access to the garden plot.

benefitting some 23,142 participants. The majority of the participants in these donor gardens were women (table 11).

In general, the donors finance the purchase of land, fencing and the digging of wells. Often grants are given in the form of in-kind inputs at the beginning to meet the operating costs of gardening. However, seldom do NGOs provide technical advice on production or arrange for the marketing of the produce. The decisions about cropping schemes are left to members. Therefore, the crops grown in a donor garden are highly heterogenous. This limits the volume of any single crop produced. Members sell their produce individually in local spot markets for cash or barter exchanges (see figure 1). No long-term or forward contracts with exporters or wholesalers were reported.

D. Individual Medium Sized Farms

There are several medium sized vegetable farms (about three to ten hectares) owned and operated by individuals. The operators are primarily men who grow vegetables and fruits for commercial purposes. They grow a variety of African and European vegetables including cabbage, cucumber, bitter tomatoes, chillies, okra, sweet peppers, bananas, mangoes, watermelons and sweet corn. They usually produce all the crops they market. However, they also have contractual relationships with small individual women outgrowers and school gardens to produce certain crops for them. The outgrowers are usually paid in cash but some are only paid two to three weeks after their sales to these producers. Although inputs are not provided by these medium sized farms to their outgrowers, a limited quantity of interest free consumption credit is provided to meet emergency needs.

These producers sell their crop to wholesalers, retailers, hotel suppliers, hotels/restaurants and hospitals. They also function as outgrowers for large commercial farms/exporters including GHE and HORTMARC. The commercial farm buyers seldom offer a down payment for the produce sold. Instead, the produce is provided on consignment or the buyers negotiate to pay two to four weeks after the sale.

Most of the operations are self financed. Some farms report that they obtained small loans from the GCDB by using their house/buildings (not land) as collateral. Some also have a credit line with the Meridian bank for other business activities so they can obtain some funds which may be allocated to farming. Some were also engaged in other business activities that helped them to cross-subsidize their horticultural activities.

E. Individual Small Farms

These gardens are generally small and are owned and operated by women. In general, the majority of these women operate individual small gardens irrespective of their participation in communal gardens, commercial farming and food crop production. Vegetables and fruits grown in these gardens are primarily used to meet household consumption needs. The excess produce is usually exchanged among neighbors and, to a lesser extent, sold in the local spot

markets for cash or barter. It is estimated that approximately 55,000 farmers (of which 92 percent are women) participate in individual and indigenous communal gardens in the country (Table 11). These operations are self financed through profits from their food production or by participation in Rotating Savings and Credit Associations called osusus and kafos.[12]

2. The Consumers

With an active tourism industry and growing urban affluence in The Gambia, and increased nutritional awareness and trade liberalization in European countries, the potential set of domestic, intra-regional and international consumers for Gambian fresh produce has expanded over the past decade. For this report, domestic consumers are defined as hotels and restaurants, local consumers and Gambian exporters. Intra-regional consumers are largely limited to consumers in Senegal, while international consumers refer to European markets (see the consumer profile in Figure 1 with the corresponding market channels).

A. Domestic Consumers

a) Hotels and restaurants

The tourist industry in The Gambia has been active and growing since the early 1980s (Table 5). Therefore, the number of hotels and restaurants serving the tourist population and their demand for fresh produce have increased commensurately in the last decade.

Currently, about 12 major hotels serve the tourist population in the country. Table 12 lists some of the major hotels, their source of fresh produce and the value of purchases. These hotels spend approximately D 110,000 (US $12,500) per week on fresh produce during the peak season that ranges from late October to early April. Roughly, US $ 450,000 was reported spent by these hotels in 1991/92 on fresh fruits and vegetables purchased in The Gambia.[13] Of course, this is a small amount compared to the European markets that imported about US $ 1.68 million in 1991/92. Nonetheless, it represents a significant multiplier effect for local producers and traders.

The majority of these hotels purchase their fresh produce primarily from hotel suppliers who are usually women playing the role of a middle(wo)man between various producers and the

---

[12] In an osusu, a group of members get together and agree to contribute a fixed amount of cash and/or kind into a common pot at regular intervals until a cycle is completed. This pot rotates among members through allotment of the pot to one member in each rotation period based on some previously agreed allocation method. See Nagarajan, Graham and Meyer, 1994b for details.

[13] This includes some items that were supplied from neighboring Senegal. However, the share of Senegalese suppliers was minimal.

hotels. However, some hotels have shifted to open spot market purchases because of increasing problems with these hotel suppliers in terms of timely supply and quality. Large commercial farms including YAMS, Farabo, SIFOE and Radville also supply these hotels and restaurants. Our interviews revealed that the hotels in general prefer hotel suppliers to large farms. Large farms were often reluctant to supply small quantities, were unreliable and supplied second grade export rejects.

b) Gambian exporters

Although the majority of Gambian exporters produce the commodities that they export, several of them also have outgrower relationships with other commercial farms, cooperatives, medium and small individual producers. The outgrowers are usually employed to produce commodities that do not require economies of scale in production and close monitoring. Some exporters offer resource providing contractual arrangements that provide the outgrowers with inputs and technical advice for production and ensure market outlets. However, the majority procure the produce through production management contracts where exporters do not provide any inputs, but control the quantity and quality of crops produced by the outgrowers, or through market specification contracts that closely resemble spot markets by offering market outlets, but no inputs or technical advice. Some commodities are also purchased in open spot markets where transactions are primarily consummated through immediate cash payments.

B. Intra-regional Consumers

The liberalized economy of The Gambia, combined with porous borders with neighboring Senegal, have facilitated the active trade of several commodities including fruits and vegetables. The majority of transactions are informal through cross border sales. Therefore, no official data are available on total volume or value of sales. We observed several Senegalese traders who regularly visit weekly markets (lumos) to procure fruits and vegetables from both retailers and wholesalers.[14]

Our interview with a Senegalese trader revealed that the majority of products procured include mangoes, bananas and African vegetables such as bitter tomatoes, hot peppers and yams. The majority of the transactions were effected in spot markets involving cash transactions. However, long term customers were able to get a limited amount of one to two week supplier credit, especially from wholesalers. Some of the Senegalese traders with communal and familial links also established forward contracts with communal gardens producing mangoes and bananas. These forward contracts assured a market outlet for the produce, but did not provide any inputs

[14] Weekly markets called lumos are special markets that meet on specific days of the week in specific locations. Usually, these markets are organized in a big town/village that is accessible to several small and medium sized villages.

to the producers. The prices were usually fixed at the time of the purchase and no advance payments or inputs were given to the producers.[15]

C. International Consumers

Gambian produce is exported to several European markets, especially to Anglophone countries. European importers/distributors in turn cater to the demand for fresh produce by the customers of supermarkets, wholesale markets and ethnic markets in Europe. Currently, there are eight Gambian producers who exported in total about 2,236 metric tons of fresh fruits and vegetables for a value of US 1.68 million dollars in 1991/92.[16] Importers include Belgium, Germany, Holland, Sweden, France, Norway and Switzerland. However, the United Kingdom imported nearly 96 percent of the Gambian horticultural produce accounting to 95 percent of the horticultural export revenues in 1991/92 (table 4).

3. The Market Agents

Several agents including middleman, wholesalers and retailers perform the marketing functions in the country. These agents operate either individually or from a market to facilitate the smooth flow of commodities from producers to domestic and foreign consumers (see figure 1).

Invariably, each village has a small daily market located in the middle of the village. In addition, weekly lumos are organized in large villages in rural areas where sellers and buyers from the same and neighboring villages meet to effect transactions. In urban and peri-urban areas, regular large markets that operate daily are built and operated by area councils to facilitate transactions between buyers and sellers including retailers and wholesalers.[17] These regular markets consist of stalls, tables and floor spaces which are rented on a first come first served basis. They are managed by market managers assisted by several security officers and tax collectors. The market manager generally allocates the spaces, settles disputes and enforces the market rules. Table 13 shows the approximate size of the urban and peri-urban markets sampled for this study. Interviews with market managers revealed that nearly 20 percent of the stall and

---

[15] These type of contracts are usually referred to as "strategic alliances" in the theoretical literature. Alliances represent flexible vertical control and are often characterized by each firm to the alliance being a stakeholder but not necessarily a shareholder in the operations. See Nagarajan and Meyer, 1994 for details.

[16] Note that the data provided by the individual exporters is a little higher than what is reported here. This indicates the poor documentation of export data by the GOTA and underreporting by the exporters to the customs department.

[17] The Serrakunda and Banjul markets were originally built by the area councils that were comprised of citizens in those areas. External donors and the World Bank, however, are now providing assistance to expand these markets and improve their drainage systems.

75 percent of the table and floor vendors sell fruits and vegetables. Other products sold include food commodities, fish and fish products, clothes and utensils. The stalls are leased to wholesalers for a year and for a fee of D 60 per month as rent in addition to a fixed deposit of D 300-1,500/stall. The table and floor vendors are required to pay a market tax of D 1 per day and their space is leased on monthly basis.

A. Hotel Suppliers

These market agents operate independently and are usually women who specialize in supplying local hotels and restaurants. They play the role of a middle(wo)man between various producers and the hotels/restaurants. It is estimated that about 12 women and three men are the major suppliers for the hotels/restaurants in the country. They seek purchase orders from the hotels at regular intervals. They usually do not produce fruits and vegetables but buy from various sources including small producers, communal gardens and commercial farms to fill the hotel orders. Some hotel suppliers occasionally travel to Dakar, Senegal to purchase fruits and vegetables that are not available in local markets.

The hotels/restaurants seldom change their core group of hotel suppliers. Several hotel suppliers reported they have been supplying the same hotels for more than five years. These hotel suppliers compete for hotel contracts based on quality, price and timely supply of produce, but they often collaborate among themselves to fill orders. In general, the hotels/restaurants choose their suppliers and fix the prices paid for the produce. There has been instances, however, where these suppliers colluded among themselves to negotiate for better prices and an extension of time to fill orders.[18]

In general, the hotel head chef or procurement manager produces a list of the fresh produce required for the next one to three days and meets with the suppliers at the hotel. The suppliers usually take turns in fulfilling the orders. For example, assume that a hotel buys from ten suppliers and places orders for fresh produce twice a week. The suppliers then informally organize themselves into two groups of five members each, and each group supplies the hotel for half the week.

Hotel suppliers usually finance their operating costs with their own funds and producers' credit. In general, they have established relationships with local producers who often supply the produce on the basis of a two to three week credit without explicit interest. Hotel suppliers also buy from spot markets and often obtain two to three day credit from these retail sellers.[19]

---

[18] Indeed, these suppliers have become so powerful that the hotels report it is now difficult for them to switch to using spot markets or other modes of purchase without facing severe political and social consequences.

[19] Spot market purchases are resorted to only in cases where the regular suppliers are unable to fulfill their demand. The regular suppliers often introduce the hotel representatives to new

Formal credit is not available for such operations. Informal mechanisms such as osusus are infrequently used for this purpose since they are most popular among participants with steady flows of income and who reside and/or work within close geographic proximity. The hotel suppliers are usually active only during the tourist season, are paid irregularly by the hotels, and do not work in a single marketplace. Therefore, credit from producers and sellers is the only accessible financial mechanism for these types of market agents in the absence of sufficient liquidity and savings to self-finance their transactions. These hotel suppliers in essence provide credit to the hotels by agreeing to receive payments two to four weeks after they deliver their suppliers. Since many producers must wait several weeks before they are paid by the hotel suppliers, they are the ones in effect who provide loans to the hotels.

It is estimated that the suppliers earn a profit of one dalasi for every four kilos of produce delivered. After paying a transport cost of D 25, a net profit of D 50 is estimated to be made by each supplier for each shipment delivered to the hotels.

B. Wholesalers

Wholesalers usually transact in larger volumes than retailers and they operate from stalls located within a market. The stalls can be leased for a year from the area council. The majority of wholesalers are men and they are required to pay a fixed deposit of D 300-1500 and a monthly rental of D 60 for a stall. Wholesalers sell produce either produced by them or procured from other producers including commercial farms, communal gardens, cooperatives and individual producers.[20] However, several products including bananas, pineapples, mangoes, potatoes and onions are imported from the neighboring countries of Senegal, Guinea-Bisau and Mauritania.[21] These suppliers usually provide the wholesalers with a two-three weeks credit without explicit interest. Some foreign suppliers, however, insist on advance payments for at least half the value of the produce purchased. The rest is paid upon receipt of the produce. The prices are usually fixed by the suppliers.

The clients of these wholesalers are retailers, hotel suppliers, hotels/restaurants and individual customers. The hotels and restaurants and hotel suppliers usually purchase on two to four week credit without explicit interest. However, retailers are required to pay in advance or immediately upon delivery of the produce. Long-term retail customers are, however, provided with a limited amount of interest free emergency loans. The volume of produce purchased by the various types of clients was stated as the principal reason for the differences in contractual arrangements that range from immediate full cash payment to short-term credit.

---

retailers and stand as their guarantors.

[20] Radville, a big commercial farm, also has a wholesale stall in the Serrakunda market.

[21] It was estimated that an average of 702 tons of onions and garlic and 698 tons of potatoes valued at US $ 703,146 and 192,254, respectively, were imported into the country by all these wholesalers in 1992 (Bojang, 1993).

The marketing activities of wholesalers were generally self financed. A limited amount of supplier's credit was also available. While they used formal financial institutions for deposit services, the informal sources including osusus, kafos, friends and relatives were used for loans. The majority of wholesalers participated in osusus. The amount of osusu contributions was larger and the frequency of pot allocation was longer than for osusus whose members were retailers and hotel suppliers.

C. Retailers

Whereas some retailers operate from either small corner stores or carry their produce on their heads for sale in the streets, the majority of retailers operate from an organized market place. The retailers who operate within a market usually rent a small table or floor space from the area council and pay daily taxes (D1/day).

Table 14 summarizes the findings from the survey conducted among 23 table and 22 floor retail vendors in five major urban and peri-urban markets. The majority of the retailers were women. On average, a retailer sold four different horticultural products including cabbage, tomatoes, onions, potatoes, lettuce, spinach, egg-plants, okra, bitter tomatoes, peppers, chillies, bananas and mangoes.

Generally, retailers did not produce the commodities they traded. Instead, they were procured from local producers, wholesalers, middle(wo)men and fellow-retailers depending on the prices offered. A majority of their transactions with suppliers were effected through spot market transactions involving immediate cash payment. Consignment contracts were not reported and long-term relationships with suppliers were seldom reported. About 11 percent of the retailers reported paying in advance to their suppliers, especially to Senegalese suppliers for products like bananas, mangoes and peppers. However, about 40 percent of the retailers were able to obtain short-term supplier's credit from wholesalers in the same market for a period of one to two weeks. The loan sizes ranged between D 60 to 9,000 with an average of about D 650 and with no explicit interest charges.

The clients for these retailers included local Gambians, expatriates, hotel suppliers, fellow-retailers from other markets and, to a lesser extent, hotels and restaurants. The majority of the clients were irregular in nature. Since there were few long-term relationships, the majority of the transactions involved immediate payment in cash. Regular buyers including smaller traders from other markets and hotel suppliers who together constituted only 20 percent of the retailers' clientele. Some of these regular buyers were able to obtain some products including mangoes, onions, potatoes and tomatoes on short-term credits for one to three weeks. The amount of these short-term supplier's credit ranged from D 55 to 5,500 with an average loan size of about D 850. An implicit monthly interest of 10 to 30 percent was reported. No advance payment was required from the clients.

Since the quantity of products sold at this level was usually small, scales for weighing were seldom used. Instead, the products were sold in groups or heaps. Scales were observed,

however, to be used by large retailers at the Bakau market which specifically caters to the needs of expatriates and hotels.

The major portion of the retailer's trading activity is self financed. Formal loans were not available but informal loans from friends and relatives were reported. Finance for these largely women retailers was generated through participation in osusus. Osusus are used to finance short-term working capital needs for the traders who work in close proximity and have daily contact. They are a less useful vehicle for widely dispersed independent agents. Nearly 72 percent of the sample of retailers participated in at least one osusu that was usually organized within the market. These osusus were generally headed by women. They functioned throughout the year although they tend to slow down during the months of April to October due to slack production and marketing activities. Osusus were generally homogenous in their member composition in terms of gender, occupation and level of income. This ensured a good flow of information among members. The homogeneity in levels of income also helped to synchronize the rotation length of the osusu with the cash flow of the members. On the average, an osusu was comprised of 24 members with each member contributing an average of D 25 every four days.[22] The contributions were often made through daily installments although the pot was allocated less frequently. Since the majority of members operated in the same market, they took their contributions to the organizer rather than the organizer collecting from them. The allotment of the pot was usually fixed based on the order of recruitment of the members into the osusu or by a member's request (for emergencies) rather than on a random lottery or bidding basis (Table 15).

Only six percent of the sampled retailers reported having deposits with formal banks. Osusus, kafo groups and moneykeepers supplied a reliable substitute for deposit mobilization services. Nearly 38 percent of the sample participated in kafos that performed rotating and non-rotating savings and credit functions, while 72 percent participated in osusus. Kafos are generally homogenous in terms of members' gender, occupation and geographic proximity. They were large with an average membership size of 68 with a range of 28 to 300 members. Only 18 percent of the sample reported using moneykeepers to save their excess funds (table 15). They preferred osusus rather than moneykeepers for saving.[23]

---

[22] The size of osusu varied between 2 to 78 while the size of contribution per member per rotation ranged from D 3 to D 200. In general, pots were allotted every three to four days. However, the time interval between each pot falls to one to two days during peak seasons and increases to seven to ten days during slack seasons.

[23] Moneykeepers are individuals who hold savings on behalf of others. Often no interest is paid on these savings but the money keeper may be expected to make emergency loans to frequent savers (Meyer and Meyer, 1992)

4. Financial Agents

The formal financial market consists of commercial banks and The Gambia Cooperative Union, neither of which are active in financing horticultural enterprises. While financial instruments including overdraft facilities, letters of credit and medium-term loans were available for various other trading activities, they were not generally available to finance horticultural activities from these sources. In addition, letters of credit and loans from off-shore banks are generally limited to those largest horticultural producers who are also engaged in several other overseas businesses. The few large commercial farms are clearly acceptable, creditworthy customers for domestic financial institutions. However, these large farm operators tend to self-select themselves out of the domestic formal credit market due to high interest rates. And they draw upon cheaper sources of credit from off-shore banks. Furthermore, deposit and checking account services from these formal institutions in The Gambia were accessible to only the large and medium-sized horticultural enterprises and dealers. The minimum deposit requirement of D 500 for maintaining savings accounts was reported to be high for many small producers and retailers.

Several NGOs provide limited finance through grants made in seeds, equipment and infra-structure facilities to members of their sponsored gardens. But, the majority of production and marketing operations of horticultural producers and traders are self financed. Informal financial markets are active in providing financial services through osusus, kafos, and moneykeepers. Also, informal credit from suppliers and several arrangements including resource providing contracts facilitate the flow of commodities in the subsector. However, short-term supplier's credit was accessible only to market agents and consumers, and not to producers. Small producers were dependent on equity and informal financing through osusus and kafos, and small outgrowers with contractual arrangements that sometimes provide them with inputs on credit.

5. Insurance Agents

Formal insurance for horticultural enterprises does not exist in The Gambia. While the Senegambia Insurance Company underwrites life insurance and insures selected enterprises, it does not insure horticultural producers, market agents and exporters. Producers, both small and commercial, are usually self-insured through their own funds and participation in mutual aid kafos or through assistance from family and friends to meet production and marketing contingencies. Exporters are not insured for the quality of their shipped produce. Furthermore, they are unable to access export guarantees provided by importers in UK and Germany because of the poor credit rating of The Gambia in foreign capital markets. Air cargo companies usually offer general liability insurance for cargoes at US $20 per box. But, it is not available for horticultural exporters. They are only offered limited insurance at a premium rate of $0.50/kg. to meet losses due to flight delays over six hours. Losses due to pilferage and spoilage during transport are not covered by this insurance. In general, importers reject about 15-20 percent of the cargo shipped by Gambian exporters due to damage. Losses caused by rejection at the port of entry due to damage and poor quality are borne entirely by the exporters.

6. Communication and Information

GAMTEL, a French based company, offers excellent fax, telex and direct dialing long distance telephone services to Gambian exporters at competitive prices. These services facilitate access to information from foreign markets for the commercial producer and exporters.

Information on domestic market prices for horticultural products are not published and, therefore, are not available to the majority of producers and market agents. Although the majority of European markets disseminate information on weekly market prices, they are not accessible to the majority of the participants in the Gambian horticultural subsector. Magazines such as Fresh Produce Journal, Eurofruit Magazine and Fresh Fruits and Vegetable Newsletter provide information about European markets on a regular basis. However, only two of the large commercial farm operators reportedly subscribe to one of these publications. The majority of the exporters/producers depended upon their agents for information on prices that prevail in European markets overseas. Suspicion is widely reported, however, about whether or not these agents always provide good information and obtain the best prices for their customer. Furthermore, the exporters/producers were generally unaware of the market size, type of outlets, consumer tastes and preferences, quality requirements in European markets, and legal procedures that are to be followed for exporting perishable commodities. The segmentation of European markets due to regional differences further adds to the problem of access to good information. No support institution exists in The Gambia to gather and disseminate information on the situation of alternative markets available for the Gambian producers/exporters. Our interviews clearly revealed that there is an information vacuum that constrains producers and market agents to quickly respond to market signals and compete in alternative markets.

7. Transport

The perishable nature of horticultural products requires the quick movement of products from producers to consumers. Good transportation facilitates the efficient flow of commodities from producers to final consumers. In addition, meeting the demand of international consumers requires efficient air-cargo facilities. Transport services in The Gambia to facilitate inter-regional and international trade, however, are minimal and this represents an important constraint for the sector. There is a lack of good roads and transportation vehicles for transport of produce from rural to major urban marketing centers. Furthermore, the country has limited air and sea freight facilities.

A. Air-freight

Air-cargo services in The Gambia are limited to one cargo company, REDCOAT, and four commercial airlines including Sabena, Air Gambia, Swiss Air and Gambia Airways. A new air-cargo company called REWARD is scheduled to begin operation in 1994 with a capacity of 20 tons per flight from Banjul to London.

a) REDCOAT

REDCOAT is a British based cargo company that began its services in the Gambia in 1976 as a Britannia Freighter aircraft around the west coast. British Airways used to be the primary carrier of air-cargo from the country. With the retreat of British Airways in 1991, however, the company began operating cargo flights under the name REDCOAT. It currently serves producers from The Gambia, Sierra Leone and Liberia. Boeing 707 aircraft with a carrying capacity of 40 tons are used to transport cargoes.

REDCOAT has an office in Banjul. Its' cargo planes originate in the UK and travel south to African countries, especially to Nigeria, carrying food and other commodities. These planes stop at Banjul on their northbound return trips to the UK. The REDCOAT office in Banjul solicits and confirms reservations for cargo space from local exporters. The arrival of the planes and the allotment of the requested space are determined by the quantity of produce exported on a given date since a minimum of 15-20 tons is needed per flight for the company to break-even. In general, two flights are operated per month out of Banjul during the peak seasons. In the 1992-93 season, however, REDCOAT operated nearly four flights a month. A total of 931 tons of cargo was transported by the company during October 1992 - April 1993, the peak season for horticultural exports to the winter markets in the UK (table 16). This represents roughly 40 percent of the total volume of fresh fruits and vegetables exported in 1991/92 from The Gambia to European markets. One of the commercial farms in the Gambia reported that nearly 50 percent of its cargo was spoiled due to flight delays and lack of cargo space. Some unhealthy competition was also reported among the leading exporters for the limited cargo space during the peak seasons.

A flat rate of US$ 0.77/kg is charged for the members of the Association of Gambian Horticultural Producers and exporters (GAMHOPE) and US $1.01/kg for others to transport fruits and vegetables. Flowers are charged differently since they occupy more space. REDCOAT is currently constructing a "Customs Shed" at the Banjul International airport to receive, screen and transport both loose and pre-packed cargoes.

b) Commercial airlines

The four commercial airlines of Sabena, Gambia airways, Air Gambia and Swiss Air also carry fresh produce to European destinations. Their capacity, however, is limited to about four to five tons per flight. In addition, the availability of this cargo space is based on the volume of passengers on the flights to Europe. Furthermore, the frequency of flights into Banjul is dependent upon the volume of tourists visiting the country. On the one hand, the peak tourist season coincides with the winter months in the UK, thus helping the horticultural exporters serve the European winter markets for fresh fruits and vegetables. On the other hand, only seven flights per week were reported to depart for European destinations from Banjul during the months of December to Early April in 1992/93. This works out to approximately 700 tons of carrying capacity of these commercial airlines during the peak export season, which is about 30 percent of the total exports of fresh fruits and vegetables from The Gambia in 1991/92. Nearly

75 percent of the total fresh fruit and vegetables are exported during the peak season of December to early April. With REDCOAT transporting about 40 percent and the commercial airlines having a capacity to transport about 30 percent of the total exports of fresh fruits and vegetables during the peak season, there is an excess demand for cargo space for at least about five percent of the produce from the exporters. The excess cargo was sometimes shipped on sea cargos through the Banjul and Dakar sea ports.

B. Sea-freight

There are only a few commercial sea-cargo vessels from the UK that dock at Banjul. Therefore, some exporters used the nearest port in Dakar, Senegal to export non-perishable horticultural items to Europe, but huge transaction costs due to transportation to Dakar and export duties in Senegal constrain the use of the Dakar ports. The potential exists to develop Banjul as a sea-port to facilitate sea-freight exports.

8. GAMHOPE

The Association of Gambian Horticultural Producers and Exporters (GAMHOPE) is a support institution for horticultural entrepreneurs in the country. It was formed in 1991 to promote the interests of local horticultural producers and exporters with the Government of the Gambia and donor communities. It is managed by an executive committee of six elected members.

GAMHOPE participates in developing a national industrial policy and lobbies for exporters regarding air cargo issues. Currently, it proposes to build, own and manage a national horticultural market that will function as an association within the private sector. This market will consist of: (i) a wholesale market with stalls that can be leased to local producers and traders in horticulture and agricultural products; and (ii) a packing house and multi-compartment cold storage facility to centralize export facilities for small and large producers. The wholesale market is expected to: (i) promote competition in the production and marketing of quality produce; (ii) encourage group marketing arrangements for exports through consolidation of produce and to attract additional air cargo capacity into the country; (iii) offer an efficient, reliable and low cost outlet for the hotels, restaurants and supermarkets in the country; and (iv) serve as a center for information dissemination by the government and NGOs, and the promotion of policies regarding exports and local marketing. The proceeds from the wholesale market are to be used to promote Gambian produce internationally, and to enhance local production and marketing. GAMHOPE has requested the GOTG to provide land, duty free fuel, a continuous supply of electricity, an exemption from area council taxes for wholesalers and producers utilizing this facility for at least the first 10 years, and an exemption from income taxes for traders.

IV. The Market Structure

The above discussion indicated that several agents compete and coordinate through various channels to facilitate the efficient movement of commodities from producers to final consumers. This section examines the market technologies followed by the various agents in the different channels to describe the structure and outline the evolution of the subsector.

1. The Channels and Market Technologies

Channels are traceable paths in the subsector through which stages in the transformation in a sequence of production/distribution take place (Nagarajan and Meyer, 1993). The channels originate with producers and ultimately reach consumers through several types of marketing agents. Based on their origin, the channels in the horticultural subsector can be broadly classified into six groups. They are: (i) commercial farms (C1), (ii) cooperatives (C2), (iii) NGO communal gardens (C3), (iv) indigenous communal gardens (C4), (v) small individual farms (C5), and (vi) medium size individual farms (C6) (see fig. 2). These channels use various types of market technologies including spot markets, contractual arrangements and vertical integration to organize their activities.

In the *spot markets*, the participants are several independent firms that specialize in one or more stages of commodity flows, thus offering the least control at all stages by a single firm/agent. The assets are owned and operated by several agents and the transactions are usually consummated through immediate cash payments where price functions as the primary coordinating mechanism.

In *complete vertical integration*, all assets at all stages from production to marketing are owned by a single firm that produces all the commodities marketed by it. This permits complete control over the production to distribution process by a single decision maker. In *taper vertical integration*, all assets in all stages from production to marketing are owned by a single firm, but the products marketed by the firm are produced both by itself and its contracted partners. A variation of taper vertical integration is *quasi-vertical integration* (also called partial vertical integration) where assets in some stages of production/marketing are jointly owned by several coordinating firms/agents that are contracted by a single focal firm. Similar to taper vertical integration, products marketed by the focal firm are produced by both the firm and its contracted partners.[24]

Between spot markets and complete vertical integration lie several types of contractual arrangements including market specification, production management and resource providing contracts. These contractual arrangements are often used to taper or partially vertically integrate a firm's operations. *Market specification contracts* are formal but open contracts that are closer to spot markets in which a marketing firm promises a marketing outlet to its contracting partners

---

[24] See Nagarajan and Meyer, 1994 for details.

without specifying the quantity to be purchased or the price. The firm also commits none of its resources to the production of the commodities. The marketing firm assumes the marketing risk and management, but transfers them to the producers at the production stage; assets are individually owned by the contracted producers. In *production management contracts*, the marketing firm has increased control over the production and management of contracted producers since it is concerned about the quality of the produce. *Resource providing contracts* are closer to taper vertical integration in which marketing firms provide market outlets and inputs for the production processes of their producer clients. The marketing firms have almost complete control over the production decisions although the assets used in production are owned and operated by the producers.

Using the concepts described above, the market technologies followed by various channels in Gambian horticultural subsector can be analyzed. Figure 2 diagrammatically presents the activities and market technologies followed by the various channels. The majority of the commercial farms (C1) performed several activities ranging from production to exporting rather than specializing in a single activity. Table 17 shows that several market technologies were used by commercial farms to coordinate their production and marketing activities. In general, the commercial farms were organized as vertically integrated structures. While some were completely vertically integrated, others were taper and partially vertically integrated through several arrangements, including resource providing and production management contracts to procure commodities from outgrowers. These contractual arrangements essentially substitute for missing information and inefficient formal financial markets. The preponderance of the vertically integrated market technology can be attributed to three factors: (i) the presence of economies of scope in the joint management of several activities and less economies of scale in specializing in just one activity such as production, (ii) high costs in monitoring outgrowers for certain crops, and (iii) high levels of access by the large firms to finance and information.

The cooperatives (C2) generally sold their produce to wholesalers and a few exporters. They were organized as quasi-vertically integrated operations. Although they employed spot market technology to sell their produce directly to domestic consumers, contractual arrangements including market specification contracts were frequently used to sell to exporters and wholesalers. The producers in NGO donor gardens (C3) and indigenous kafo gardens (C4) specialized only in production and used the spot markets to sell their produce directly to domestic consumers. Small individual producers (C5) used spot markets to sell their produce in domestic markets. The producers in medium sized gardens (C6), however, engaged in several activities and their organization resembled quasi to taper vertical integrated operations of the commercial farms. They used resource providing and production management arrangements to procure selected products such as lettuce and chillies from outgrowers.

2. Choice of Technology

The analysis above reveals that a variety of market technologies ranging from spot markets to complete vertical integration were used in the subsector to coordinate the activities of various agents and to enhance the smooth flow of commodities. Diversity exists even among

participants in the same channel producing/trading in almost same commodities. For example, table 17 shows that commercial farms used several types of market technologies to carry out almost similar activities. In short, there was neither uniformity nor a clear pattern in the market technology used by the several agents in the horticultural subsector. Several factors contributed to this diversity including differences in input needs and the production cycle of the crops grown, variations in volume of crops produced, types of consumers served, and degree of access to information and finance. It can be postulated that the choice of market technology used by an agent is importantly affected by asset specificity and uncertainty in the production and marketing of the produce, access to finance and marketing services and information, and the changing patterns of consumer demand that alters the markets served.[25]

While asset specificity varies with the type of crop, the production and marketing uncertainties for horticultural products are generally high compared to food crops. The large commercial farms reported that asset specificity was high because they cultivate specialized Asian and European crops for export. High levels of asset specificity would likely lead commercial farms to produce on a large scale to realize economies of scale in production. However, the use of outgrowers by some of the commercial farms for certain crops indicates a lack of economies of scale in production and management by a single farm, low costs required to monitor outgrowers, and high labor costs for own production. Nonetheless, outgrowers are not likely to play as major a role in organizing horticultural production in The Gambia for exports as in Kenya because of: (i) unrestricted access to land in the Gambia,[26] and (ii) the majority of crops currently produced for exports require close monitoring to maintain quality. There are clear indications of economies of scope in production and/or economies of scale in management that imply a preference for a completely vertically integrated market technology particularly for large farms active in export markets.

It is important, however, to note that not all commercial farms were completely vertically integrated from production to exports. For example, some farms did not produce the crops they exported and some farms did not participate in export markets. Limited access to finance and information acted as barriers for various channels to completely vertically integrate their operations. While a few large commercial farms are able to access off-shore finance, most small and medium farms cannot access loans from either domestic or foreign sources. Only a few commercial producers have established contacts in the European markets through familial connections and agents to serve as their advocates and consummate their transactions. The majority of the producers/exporters are constrained to sell to European agents based on the prices offered by them. Many of the larger farms owned by expatriates have better contacts in both the domestic and international markets so they have more bargaining power compared to

---

[25] See Nagarajan and Meyer, 1994 for a more detailed explanation.

[26] Restrictions on the size of landholdings by foreign nationals in Kenya limited their operations to small farms and the use of contractual arrangements with outgrowers to obtain sufficient volumes to export.

the new farms owned by Gambian nationals. As a result, those with a better access to finance and information tend to completely vertically integrate their operations and have a comparative advantage over their competitors (Table 18). Fruit and vegetable exports have essentially become an "enclave" operation to those with better access for finance and information about foreign markets.

A dual structure has emerged among the horticultural producers in the country. At the top are a handful of big operators who have largely self-financed or used external sources of funds to enter into European markets. They are the only producers that export to European markets on a sustained basis. Below them are a mixture of medium to small producers, only a few of which have participated in the European export trade on a sustained basis. They currently produce for the domestic hotel market in the tourist sector, occasionally produce as outgrowers for the large producers/exporters. The smaller horticultural producers are supported in part through NGO and competitive programs, particularly women's groups, and produce exclusively for the domestic wholesale, retail and hotel markets. The organizational patterns and market technologies adopted by these various channels influence their potential to serve different types of domestic and international consumers. This point is further explored in later sections.

The changing patterns in consumer demand in the importing countries affect the market technologies followed by the agents in the exporting countries. For example, the high quality requirements demanded by the European consumers can only be met by farms that are able to closely monitor their production activities. This often leads the exporters to vertically integrate their operations from production to exports to ensure quality. The European markets are undergoing significant changes in consumer tastes and preferences, demand for fresh produce and trade policies, all of which affect imports from developing countries.

The above discussion underscores the importance of information about international markets. It is important for producers/exporters to be aware of these changing market trends so that they can adapt their production/exporting technologies accordingly. The next section highlights some key aspects of the UK and European markets and discusses the implications of our analysis for Gambian producers/exporters.

V. The European Markets

1. The Market for Fresh Fruits and Vegetables in UK

The participants and the structure of the market for fresh fruits and vegetables in the UK have undergone significant changes in the past decade. The consumption and importation of fresh fruits and vegetables from developing countries has increased. The configuration of the outlets for fresh produce has changed. These changes have been caused by the increased demand for a continuous supply of quality fresh fruits and vegetables due to higher incomes, increased health awareness and the increasing popularity of exotic fruits and vegetables. In addition, increased participation in the labor force has decreased women's time available for shopping in wholesale and specialized markets, and increased the demand for conventional and

healthy foods. Similar trends have been observed in Germany, France, Switzerland, Holland and Italy. This section first examines the current size and structure of the UK market. This is followed by a discussion about future developments in the UK and European markets, and the implications for producers/exporters in The Gambia. The analysis presented in this section is based on informal interviews conducted with various participants in the London market, and documents published by Geest International (UK), USDA, OECD and Abt. Associates.

A. The Demand for Fresh Fruits and Vegetables

The total volume of the fresh fruit and vegetable market in the UK has increased from 11.1 to 12.9 million tons (15% increase) in the last decade (table 19). While the consumption of fresh produce has declined by seven percent, the consumption by catering services has increased by 65% (Table 20). The caterers serve both domestic and international consumers. The per capita domestic consumption of fresh fruit has increased by 2.1 percent from 980 to 1988 while fresh vegetables have declined by 6.3 percent (Table 21).

B. Importation of Fresh Fruits and Vegetables

There has been increased demand for the continuous supply of fruits and vegetables, which cannot be met by domestic production in the winter season. In addition, increased exposure to tropical regions by British consumers through tourism has increased the demand for exotic fruits and vegetables. These two factors have increased imports from countries capable of supplying the traditional products during winter months and the exotic tropical produce. The major imported fruits and vegetables are bananas, figs, grapes, mangoes, melons, papayas, peaches, nectarines, pineapples, asparagus, aubergines, zucchinis (courgettes), peppers and tomatoes (table 22). The value of imports of fresh produce to the UK increased by 280 percent over the 1985-90 period (Table 1). The share of imports in the total volume of the UK fresh produce market also increased from 22 to 30 percent over the period 1978-88 (Table 23). In general, the share of imports of fresh fruits and vegetables from developing countries in total EEC consumption increased from 4.9 to 6.8 million tons (39% increase), while imports from other European countries increased from 8.5 to 10.7 million tons (26% increase) during the 1983-89 period (Table 24). Imports are growing at the rate of seven percent per annum in EEC countries, especially for bananas (USDA).

C. The Market Outlets

The market share of different outlets for fresh produce has shifted in the UK from wholesale to supermarkets during the past two decades. The large wholesale markets, including New Covent Gardens and the Western International Market, and the green grocers are increasingly being replaced by large supermarkets, new types of green grocers and food processors. The trend has been towards fewer and bigger supermarkets that stock more convenience and take-out food and allocate more space to fresh fruits and vegetables. On the other hand, the number of smaller convenience stores are increasing, especially in rural areas.

Furthermore, ethnic markets are increasing to serve the growing Asian and African communities in the UK (table 25).

Several factors contribute to these trends. With the increase in women in the labor force and single parent households, the convenience of one-stop shopping offered by supermarkets is increasingly preferred to wholesale markets and specialized green grocers. The increase in working women has also increased the demand for food away from home, pub foods, pre-cooked foods, salad bars at supermarket delis, and cut, frozen and canned fruits and vegetables. A niche market has emerged for processed fresh fruits and vegetables for supermarket delis, hotels and restaurants and catering industries. It has been estimated that the UK catering market is worth 1,036 million pounds and accounted for 43% of the total fresh fruit and vegetables sold in the UK in 1990-91 (Geest International). Therefore, several wholesalers and caterers have emerged to service these niche markets.

D. Commodity and Financial Flows

The channels used for the commodity and associated financial flows from foreign and domestic producers to UK consumers are diagrammed in Figure 3. It has been estimated that nearly 12.8 million tons of fresh fruits and vegetables per annum are marketed through these various channels including importers/distributors, wholesalers, supermarkets and ethnic markets (Geest International).

a) Commodity flows

Domestic producers in the UK have more direct access to consumers than do foreign producers. The majority of the foreign producers sell through importers/distributors who play a major role in matching domestic and foreign producers with market outlets. However, some foreign producers are able to utilize their familial and personal connections to more directly market to consumers in some ethnic markets.

The importers and distributors have become important and are increasingly catering to the needs of the supermarkets which have become major outlets for fresh produce in large cities. Supermarkets have been driven to establish high standards and quality requirements due to intense competition and to minimize legal problems that might arise from dissatisfied consumers. The importers and distributors, therefore, have improved their strategies to supply the increasing supermarket demand for high quality fresh produce. In particular, their procurement, shipping and handling techniques, and quality control procedures have improved. Interviews with a major importer/distributor in the UK revealed the following:

- Wholesale markets are being replaced by supermarkets that cater to 60-70% of urban consumers of fresh produce. The wholesale markets essentially meet the demands of the food catering industry, hotels, restaurants and food processing companies.

- The supermarkets specify the quantity of produce they require at a specific point in time and communicate their demands informally to importers/distributors who approach them for sales. The supermarket is not bound to accept the produce supplied by any importer/distributor. Furthermore, no formal contract is executed regarding the quantity and price of the produce desired. The importers/distributors compete for sales in terms of quality, timely supply and price. Over time, the supermarkets tend to favor those importers/distributors who guarantee a continuous and reliable supply of produce.

- The supermarkets have the power to accept or reject the produce supplied by an importer/distributor. This fact, in addition to the lack of a formal contract regarding prices, compounds the market risks for the importer/distributor. This situation requires that importers/distributors have cold storage facilities to absorb any unwanted commodity, to meet demand on a short notice, and to maintain the quality and shelf-life of the produce. Therefore, a "cold chain distribution system" has been developed wherein products are shipped from the country of origin through importers to supermarkets under carefully controlled temperatures. Large refrigerated trucks are used by the importers/distributors to transport the produce from refrigerated air and sea cargo carriers to their cold storage facilities and finally to the supermarkets.

- Strict quality standards specifying the color, shape, size and texture are fixed for fresh produce sold in the supermarkets. An example of the quality specifications for yellow honeydew melons established by one of the leading supermarkets in the UK is provided in Appendix 2. Since consumer protection laws are strictly enforced, the supermarkets exercise "due diligence" in gathering full information about producers and exporters. An unsanitary production environment and the excess or untimely use of chemicals may lead to health problems and hence consumer litigation against the supermarket. The importers/distributors arrange for field visits by the supermarkets to the exporting countries to ensure them that a clean production environment exists and quality control is assured at the production level.

- The importer/distributors, in turn, exercise "due diligence" concerning the production techniques followed by their exporters/producers. The producers/exporters are mandated to follow the pre and post harvest techniques developed by importers/distributors to assure quality produce. An example of the pesticide policy followed by J.O. Sims, Ltd., a leading importer/distributor, is provided in Appendix 3. This policy has been distributed to producers and is strictly enforced by the Sims company.

- The importers/distributors have also established a "butterfly grading/licensing" system to reduce grading and standardization costs. This butterfly grading is based on the post-harvest technologies followed by the producer/exporter in terms of storage facilities. The storage facility should be properly ventilated and free of pests and diseases. The exporters who meet the standards are awarded a "butterfly" which allows them to pre-pack their produce at the farm according to the specifications established by the supermarkets instead of shipping bulk cargoes for repacking by the importer/distributor.

This procedure reduces spoilage, and packaging and grading costs incurred by the importers.[27] The exportation of prepacked produce also increases the acceptance rates of shipments sent by exporters, and increases the prices paid.

- It was reported that while 60% of the clients of importers/distributors were supermarkets, the remaining 40% consists of wholesalers and green grocers. Generally, the importers/distributors direct their top grade domestic and imported produce to supermarkets while the lower quality goes to wholesalers and green grocers. The long-term business relationships established over time between wholesalers and importers/distributors facilitate these transactions.

b) Financial flows

The physical flow of commodities is accompanied by financial flows to pay for the transactions among agents in the channels of the fruits and vegetable subsector. These flows can be summarized as follows:

- Exporters in developing countries are seldom provided with advances from importers/distributors or other agents in the marketing channel. Instead, the exporters normally must provide 30 to 90 day supplier's credit to the importers at zero interest. Implicit interest charges, if any, are usually lower than the official bank rates in the UK.[28]

- No insurance is available to cover exporter's losses during transport and the possible rejection of a shipment by the importers. Exporters from a few countries are, however, able to obtain export guarantees from their governments.[29]

- The importers/distributors inspect the imported cargo and decide to accept or reject it within 24 hours of its arrival at the airport.[30] The exporters are notified immediately

---

[27] If the produce is not pre-packed in the exporting country, it needs to be packed according to supermarket specifications in the UK. Labor costs are substantially higher in the UK relative to several of the exporting countries in the developing world.

[28] The exporters usually finance their activities through equity funds and the limited availability of domestic and off-shore financing. In general, letters of credit or overdraft facilities in terms of open credit line are not available for exporters of horticultural products in many developing countries including The Gambia.

[29] No such guarantees are available in The Gambia, so exporters bear all the risks.

[30] The Ministry of Agriculture inspects for pests and diseases in the imported cargo. The quality of the produce is, however, inspected by the importer/distributor.

of their decision. In cases of rejection, proper documentation in terms of pictures of the cargo and certification by a quality control inspector are provided to the exporters.

- The exporters are provided with two choices· (i) they can accept a fixed price at the time of procurement by the importer, or (ii) they can place the commodities on consignment. It was reported that the majority of exporters from developing countries prefer to place their produce on consignment rather than accept a fixed price.[31] Either way, the importers pay a token amount to the exporters upon acceptance of the cargo and the balance owed after 30 to 90 days. The importers sell the produce, deduct a commission of 6 to 8 percent of the total value of the produce, and remit the rest to the exporter. For example, assume that an exporter from the Gambia sends boxes of grapes to a UK importer. Suppose that the exporter decides to place the produce on consignment and the importer pays $2.50 per box upon acceptance of the produce. The importer then sells the produce after notifying and getting acceptance from the exporter on the prices quoted by the buyer. The proceeds from the sale are remitted to the exporter after the importer deducts the commission. In general, the established importers paid their exporting clients within two to three weeks of the sales irrespective of the time taken by their buyer to pay them.

- The supermarkets procure the products on a 30-45 days supplier's credit from the importers/distributors. The importers/distributors are usually insured to cover possible spoilage of the produce after they take possession of it.

- The retailers in the ethnic markets procure products through established agents in the wholesale markets on a consignment basis or 30-60 day supplier's credit. The agents in turn import directly from the exporters/producers who provided them with the credit.

E. Market Structure

The changes in consumer demand and the resulting shift in importance of alternative outlets have influenced the structure of the fresh produce market in the UK. The market is segmented and is comprised of oligopolistic supermarkets, competitive wholesalers and monopolistic ethic markets that serve specific market niches.

The importers/distributors compete and coordinate among themselves to service various outlets. It is difficult, however, for the importers/distributors to collude and dictate prices to

---

[31] The prices of several commodities at various UK markets are available to the public on weekly basis. Therefore, exporters can be informed of the prevailing prices in the UK markets at a given time. This reduces the possibility of cheating by the importers. However, some exporters in The Gambia expressed fears about the honesty of the importers with whom they did not have a long-term relationship. Therefore, they preferred a fixed price contract even though it paid them less than a consigned cargo.

the supermarkets for the following reasons: (i) the products traded are highly heterogenous, (ii) the products are procured from heterogenous sources, (iii) the consumers served are highly heterogenous, and (iv) the volume of products required by the supermarkets is not fixed but fluctuates with the season.

There are indications of economies of scale and scope, especially the marketing of regular fruits and vegetables produced in Europe. Therefore, large supermarkets dominate in selling regular fruits and vegetables. However, niche markets for processed foods, tropical and exotic produce that need specialized agents are dominated by ethnic markets.

The current market structure is expected to be further influenced by changes in the EEC, consumer tastes and preferences, the CAP and other trade policies. The next section outlines some possible future developments for fresh produce in the UK and European markets. That will likely have an impact on exports from The Gambia.

2. Future Developments in the UK and European Markets

The market for developing countries in Europe is segmented along past colonial lines - Anglophone countries trading mostly with the UK, Switzerland, Germany, etc., while the Francophone countries trading mostly with France, Italy, etc. Currently, 60% of all EEC imports are from countries participating within their network of preferential arrangements (The Gambia being one of the beneficiaries). The anticipated single European market established through integration and trade liberalization policies of the European Economic Communities (EEC) under the Common Agricultural Policy (CAP) will have profound implications on the trading patterns between the EEC and developing countries. On the one hand, the total market size will offer a huge potential for exports from developing countries. On the other hand, the developing countries may be constrained by stringent EEC quality standards, common tariffs for agricultural products, and new EEC policies that may emerge. It is important to understand the implications of the CAP and a single EEC market for exports from developing countries. This section, based on our interviews with key participants in the UK market and researchers at Abt. Associates, provides some insights into expected future developments in the European markets and their implications for Gambian producers/exporters. Although the specifics cannot be predicted, the broad outlines of future developments can be identified.

The CAP was altered by EEC in May 1992 with the change going into effect in 1993/94. The recent changes include a reduction in the support price for EEC farmers (mainly for grains, beef, sheep and tobacco), a provision of direct support payments to farmers, and limits on agricultural production in the EEC countries (USDA, 1992). Although the CAP does not explicitly cover fresh fruits and vegetables, it has implications for the fresh produce industry. It is expected that the CAP will lead to a phasing out of the reference price system and an

adjustment in internal market prices to world prices.[32] The liberalization of trade policies and the integration of the EEC will likely increase incomes and, thereby, consumer demand for food commodities. Furthermore, another 12 nations are expected to join the EEC by 2010 expanding its total population to 481 million from 345 million today.[33] The free international markets established in 1993 will be extended to new members further increasing the size of the European market. The General Agreement on Tariffs and Trade (GATT), if enacted, will induce the CAP to further liberalize the EEC market resulting in a wider market for imports from developing countries.

The more liberal external trading policy and the reduction in surplus production within the EEC will lead to a growth in intra-European trade and broader European markets. On the one hand, these changes will create opportunities for imports from developing countries to meet the increasing demand for fresh fruits and vegetables.[34] On the other hand, there will be opportunities for European countries with favorable port facilities to function as hubs for importers to several other European countries. This implies that sales to a single distributor/importer will offer broad markets in Europe. Furthermore, the current heterogeneity in quality requirements for imported fresh produce across European countries will likely be reduced to more unified requirements. Although consumer tastes and quality requirements in EEC may tend to converge, strong regional preferences may continue to ensure some degree of market segmentation leading to opportunities for niche markets.

The growing affluence of EEC consumers, especially in Germany, UK and France, will: (i) reduce physical work thereby encouraging lighter meals and an increased demand for salads and fruits, (ii) facilitate travel to exotic places and increase the demand for exotic fruits and vegetables, and (iii) create a demand for improved quality due to increased awareness about diet and nutrition. These changes will increase the demand for fresh fruits and vegetables and increase expenditures on fresh produce. Estimates from seven EEC counties indicate that per capita consumption of fresh fruits and vegetables increased one percent every year from 1980 to 1990. The per capita consumption of fruits increased from 84 kg in 1980 to 94 kg in 1990

---

[32] Reference prices are fixed for certain crops by the EEC Council of Ministers based on the prices at certain representative European markets. These reference prices are essentially floor prices that become effective during specified periods of time (see Appendix 4 for reference application periods for horticultural crops). The importer is charged a "countervailing duty" equal to the difference between the reference and import price if (i) the import price remains at least 0.6 ECU per 100 kg below the reference price for two consecutive days, or (ii) the import price stays below the reference price for two out of seven days.

[33] The Canary Islands, Austria, Norway, Sweden, Finland, Iceland, Turkey, Malta, Cyprus, Hungary, Poland, Czechoslovakia are expected to be included in the EEC by 2010.

[34] However, the expansion of the EEC with Eastern European countries and the increased participation of Spain and Portugal in EEC trading activities will increase the competition for other exporting countries.

and vegetables from 79 to 85 kg during the same period (Geest Report, 1990/91). These changes in consumer tastes and preferences are expected to: (i) stimulate EEC public and private research and development in new directions to create new products, (ii) induce increases in EEC support for generic advertising of fruits and vegetables to further increase their consumption, and (iii) promote modern retailing techniques.

Changes in consumer tastes and preferences will continue to transform food retailing. Supermarkets will increasingly dominate the retail industry in affluent areas. Cost efficient technologies will be developed to improve the quality, variety, appearance and taste of products. Supermarkets will practice "due diligence" rather than "blind purchasing" to assure quality standards. This may lead to more direct trading between supermarkets and domestic and foreign producers with importers/distributors playing a matchmaking role. While the supermarkets will serve the major urban populations, the ethic, wholesale, specialized green grocers and fruiteers, and small farm markets will continue to serve less densely populated and lower income areas as well as niche markets including the catering industry, hotels and ethic communities.

Strategies focussing on product diversification, creation of brand names and information systems to facilitate programmed buying of produce will become important. The supermarkets may improve relationships with their suppliers by forming partnerships with importers or producers in developing counties to assure a reliable supply of good quality products. Therefore, there will likely be a growth in supermarkets, hyper markets, joint ventures, strategic alliances and developments in private label food sales. It has been estimated that private labels for supermarkets account for 30 and 29 percent of food grocery sales and 55 and 18 percent of frozen vegetables in UK, and France and Belgium, respectively (Abt. Associates).

Importers and distribution companies will play a major role in matching supermarkets and wholesalers with exporters from various developing countries. Due to increasing labor costs in EEC, producers in third world countries will be preferred who can directly deliver quality controlled fresh produce that has been prepacked, pre-priced, bar coded and labelled to prior specifications.

Increased importance will be given to packaging and quality of produce with increased emphasis on using reusable and recyclable packaging materials. The definition of quality will be extended to include flavor, taste and texture of produce in addition to freshness, size, shape and color.

European producers will improve their marketing organizations, and production and post harvest technologies to produce quality products at a reduced cost. Environmental legislation and consumer preferences toward organic products will shift production practices from intensive cultivation using agro-chemicals toward environmentally sound farming practices.

Air freight will be the primary carrier of imports but refrigerated sea freight will also be improved. There will be improvements in hub air and sea ports to facilitate imports from

developing countries. The produce will then be transported efficiently by roads or air to other European countries to maintain freshness and reduce losses due to spoilage.

The creation of a single European market and possibly a single European currency will also facilitate free capital flows. Banks, insurance and lending institutions will be able to service the entire EEC. Several joint ventures and acquisitions of banks and insurance companies in the past two years have been reported involving several EEC countries (Abt. Associates). Exporters will also be consolidated as they seek to reduce costs through centralized operations.

3. Summary

The discussion above about future developments in European markets indicates the following:

- Consumer driven changes are transmitted to the producers/exporters through several channels involving retailers, wholesalers and importers/distributors.

- Exporters from developing countries are faced with increasing challenges including product standards, labelling and packaging requirements, all of which will gradually become more consistent across the EEC countries. Exporters need to continuously monitor these changing standards to maintain their competitive edge. This underscores the importance of access to good information.

- Producers who are able to move their produce directly into retail markets will have an advantage over those who cannot do so. The growth of private labels provides opportunities for exporters to pre-pack their produce for European retailers and thereby increase their market opportunities. In other words, economies of scope can be realized for those exporters who are able to directly deliver pre-packed produce to retailers. This may induce the exporters to vertically integrate their operations from production to exports rather than to depend on spot markets.

- Packaging and post-harvest handling requirements are becoming increasingly strict in EEC countries.

- The demand for organic foods has been steadily growing among EEC consumers, but is seldom met through imports.

The next section provides some insights into the implications of these future developments for Gambian producers/exporters.

VI. The Gambian Horticultural Subsector: Constraints and Potential to Serve Alternate Markets

Given the structure of the Gambian horticultural subsector and the requirements of the European markets, it is important to examine the potential of The Gambia to expand and serve alternate markets in Europe, and to identify the constraints faced in doing so.

1. Potential

The potential exists for the subsector to expand and serve alternative domestic, intra-regional and international markets. An expanded horticultural subsector could become a major foreign exchange earner and provide year round employment to several thousand agricultural workers. Since the majority of horticultural operations involve women laborers, the increased employment and income would have a favorable gender based distributional effect. The tropical climate, a high water table in greater Banjul and surrounding peri-urban areas, good soil texture, abundant land, proximity to European markets, good tele-communication systems and the availability of low cost labor facilitate the production of horticultural crops at favorable costs and allow producers to be competitive in European winter markets. Implementation of the Common Agricultural Policy (CAP) by the European Economic Community along with increased demand for fresh fruits and vegetables in Europe creates opportunities for The Gambia.

The organizational patterns and market technologies adopted by Gambian producers/exporters, however, will influence their potential to serve a range of domestic, intra-regional and international consumers. Table 26 presents selected organizational features of producers/exporters and explores their potential to serve domestic, inter-regional and international markets. The largest commercial farms are vertically integrated from production to exports due in part to their access to finance and strategic market information and production technologies. Therefore, they are able to efficiently monitor labor and achieve economies of scale and scope in their operations. Their centrally integrated decision making strategy helps achieve cost economies in management and high quality standards. Therefore, they have a good potential to serve domestic, intra-regional and international consumers.

The operations of communal gardens and small individual producers are highly fragmented and follow spot market technology. This tends to reduce their ability to efficiently serve intra-regional and export markets. They cultivate several crops of different varieties in small quantities. So, they are most often unable to meet a regular schedule of harvesting and packing required by exporters. Several exporters who employed them as outgrowers expressed dissatisfaction about their production ability and the untimely delivery of quality produce. Therefore, while they can serve domestic markets, they are not reliable sources to serve domestic hotels, intra-regional and international consumers.

Cooperatives can be reliable outgrowers for exporters because decisions about cropping schemes and varieties grown are made by committees. Thus, the cooperatives are able to produce a larger quantity of similar crops and varieties at a specified time. Nevertheless, their

potential to export is limited due in part to their limited access to finance and information about markets and technology.

Medium sized farms are usually organized as quasi-integrated operations. They have a good potential to serve domestic hotels and intra-regional consumers. However, their limited access to information and finance constrains them from serving international markets except as reliable outgrowers for exporters.

The potential for Gambian producers/exporters to expand into alternative markets is constrained by several factors discussed in the next section.

2. Constraints

Gambian producers/exporters are faced with several constraints that limit their potential to meet the changing demand of European consumers. Principal among them are the following:

A. Physical Constraints

There is a serious lack of infrastructure facilities including good roads and transportation vehicles. In addition, air and sea freight services are inadequate and unreliable for export markets and there is no public cold storage facility at the airport. Hence, large commercial farms have been induced to build their own. Cold storage facilities are important to reduce production and marketing uncertainties of perishable commodities. They are especially important when the exporters are left with huge quantities of perishable commodities due to inadequate cargo space on airlines. The thin domestic markets and lack of processing industries aggravates these problems and underscores the need for cold storage.

In the European markets, the growth of private labels provides opportunities for pre-packing and increases market opportunities for exporters. However, packaging requirements are becoming stricter in EEC countries. Most packaging materials for Gambian exporters including cardboard boxes are imported from Senegal. Small producers report that it has been difficult for them to individually import packing materials and break-even.

B. Research, Development and Extension Constraints

There has been a serious lack of public investment by the GOTG to research new production and post-harvest technologies for horticultural crops. The limited amount of research is currently undertaken by the private commercial farms operated by foreign nationals. In addition, the extension services available in the country are more suitable to provide technical assistance and disseminate information about new food crop technologies than new horticultural crop technologies.

C. Information Constraints

There is a lack of information about the alternative markets available for Gambian horticultural products. For example, the majority of medium sized commercial producers are unaware of European markets in terms of competitors, market size, niches, outlets, agents and prices. Gambian exporters are faced with challenges including product standards, labelling and packaging requirements, all of which will become increasingly consistent across the EEC countries with the harmonization induced by the Common Agricultural Policy. Exporters need to monitor continuously the changing standards across EEC countries to keep up-to-date and maintain their competitive edge.

D. Financial Constraints

Domestic banks are too costly and inexperienced to finance participants in the horticultural sector for investments and working capital needs to service the flow of commodities from producers to final consumers. Access to off-shore financing is limited to only the largest producers who have established their reputation through earlier overseas transactions related with other business activities. Therefore, the majority of the small and medium sized commercial farms are dependent on self finance and informal finance. Fortunately, several informal mechanisms such as supplier's credit, contractual arrangements, osusus and kafos are in place to facilitate their operations.

E. Insurance

There is a lack of export guarantee schemes to insure exports of perishable commodities for The Gambia. The risks are borne entirely by the exporters.

F. Government Support

There is no government lobbying for Gambian exporters in European countries. In addition, the GOTG does not finance trips for Gambian exporters to build networking contacts and information by attending marketing and packaging workshops or trade fairs in selected European countries.[35]

For these several reasons, it is likely that only the largest Gambian producers will be able to consistently supply quality products and adopt technologies to quickly respond to the changing demands of EEC consumers. Several of these constraints will have to be reduced if the country is to develop a strong horticultural subsector capable of serving alternative markets including the European market. In this respect, the experiences of other developing countries that serve European markets may provide useful lessons for The Gambia.

---

[35] The new USAID project performs several of these functions.

3. Lessons Learned from Other Developing Countries

A. The Kenyan Horticultural Sector[36]

Kenya was a pioneer in Africa in horticultural exports. It dominated the African export markets for horticultural produce in Europe for over two decades. In recent years, however, export growth has slowed and the quality of Kenyan products has declined (Nyoro, 1993). Kenya has lost its competitive edge in European markets and the major African exporters to Europe are now South Africa and Morocco (Table 2). An examination of the factors that shaped the evolution, structure and performance of the Kenyan horticultural sector provides insights for other African countries that venture into high value export markets.

While small quantities of passion fruits and potatoes were exported in the early 1940s, Kenya was a net importer of fruits and vegetables until 1965. In 1966, it started to export canned pineapples to Europe. The production and exporting firms were heavily protected and subsidized by the government. Later, government investments in infrastructure facilities with collaboration from foreign investors provided a boost to the subsector. The government also established the Horticultural Crops Development Authority (HCDA) in 1967 to fix horticultural prices, facilitate marketing and processing factories, and mandated the Department of Agriculture to provide technical assistance, seed certification and quality control for fresh export crops. Since the 1970s, the aggregate value and volume of Kenyan horticultural exports have increased substantially with an average annual increase of 18.2 percent in the value of total horticultural exports and 22.3 percent in fresh horticultural exports between 1977-1991. By 1990, horticultural exports accounted for 21 percent of total agricultural export earnings and 13 percent of total export earnings. Fresh horticultural exports accounted for 53 percent of the value of total horticultural exports (Nyoro, 1993). The principal horticultural exports include cut flowers, french beans, snow peas, mangoes, avocados, processed and fresh pineapples, and Asian vegetables. While the European Economic Community is the main importer of Kenyan exports, the UK accounts for 36 percent of the total quantity of Kenyan exports followed by the Netherlands (18%), France (16%) and Germany (13%) (Jaffee, 1993).

The phenomenal growth in horticultural exports has been caused by the active role of the private sector in promoting horticultural production. Encouraged by favorable international markets for horticultural products, the expatriate owned private and cooperative enterprises ventured into exporting high quality fresh fruits and vegetables from Kenya by air freight during the late 1960s to meet the demands of the European winter markets. The limited air-cargo space and inadequate infrastructure facilities, such as irrigation systems, storage, road transport and marketing, constrained the development of the subsector and, therefore, exports grew only moderately. However, major investments by the Kenyan government in collaboration with multinational corporations in irrigation and processing systems, expansion in air-freight facilities

---

[36] This section is compiled from information gathered through several personal interviews conducted by the authors, and publications by Jaffee (1992, 1993) and Nyoro (1993).

combined with favorable international market conditions, provided the required boost. The government provided foreign investors with low cost access to land, with preferential and subsidized access to road, rail and electricity, and with reduced financial risks (Jaffee, 1992). While the HCDA was supposed to license exporters, collect and disseminate domestic and international market information, supply inputs to farmers including credit, assist in grading, storage, collection, transport and warehousing of produce, it was inefficient. This left the horticultural sector to be dominated by the private sector in production, procurement, marketing, finance, and to a large extent research on market information and new production and post-harvest technologies.

Much of the early export oriented horticultural production was dominated by three large Kenyan-Asian firms and by a few government supported Kenyan-African organizations of small holder farms. The exporters contracted primarily to procure the produce from medium to large scale producers and provided them inputs including credit. With the increase in the number of fresh produce exporters during 1970s, a few vertically integrated firms emerged and several developed contract farming relations with outgrowers. The increased revenues from horticultural production and "Kenyanization" encouraged the entry of several Kenyan-African small farmers, and by 1985 nearly 35,000 small farmers were producing specifically for export markets. The number of exporters increased from three firms in the mid-1960s, to eighty in the 1970s, and to over one hundred in 1980s. This large number of exporters could not be adequately serviced through the limited air-cargo space. Also, brand names for the country could not be developed. Furthermore, with the increase in the number of competing exporters the loyalty of small farmers to their established exporter declined. The small growers were often delinquent with exporters in their supply of produce and loan repayment. These problems induced the exporters to reduce their contract farming operations and completely vertically integrate their operations. Furthermore, significant economies of scale in marketing, strong technical, financial and managerial barriers to entry, and the oligopolistic structure of the world markets have encouraged vertical integration. Therefore, although the export sector is fragmented in terms of ownership by Kenyans and foreigners, it is dominated by several centralized private firms that are vertically integrated in their operations. This structure of the sector facilitates exports but has serious implications for the distribution of benefits from horticultural trade.

The lessons learnt from the Kenyan experience can be summarized as follows:

- The private sector, both local and foreign, has played a dominant role in commercial production and marketing. The government played an important facilitating role during the take-off stage by providing marketing infrastructure.

- Favorable international market conditions along with prior or parallel developments in complementary industries which lowered input and infrastructure investment costs during the take-off stage in 1968-1975 also facilitated growth of the subsector.

- While the domestic markets remained decentralized, the export markets became highly concentrated in a few firms. First, contract farming and, later, vertical

integration/coordination of production and marketing activities were the prominent marketing technologies followed by the exporters.

- The lack of effective public investments in research and extension contributed to the inability of small farmers to compete with large private firms that developed their own research centers. The private firms were, however, unable to compete with South Africa or Israel where public investments in horticultural research contributed to their success in international markets.

- An indiscriminate policy towards licensing of exporters in the 1980s without adequate research on the size of export markets, air-cargo space, infrastructure facilities and financial markets (neither domestic financial markets nor foreign capital were able to serve the small Kenyan-African farms) resulted in sharp competition among the exporters and the emergence of (centralized vertically) integrated private firms. The presence of several exporters also constrained developing commodity specific brand names for Kenyan products.

While the Israeli and South African governments collected and disseminated market information and represented the interests of their exporters in world markets, Kenya largely depended on private firms to undertake these tasks. Governmental efforts to collect and disseminate market information were inefficient. Therefore, although the horticultural subsector is still a high-value exporter, Kenya has lost its competitive edge in international markets due to its underinvestment in research, extension and development of marketing infrastructure.

B. Costa Rica and the Windward Islands: Two Success Stories of Exporting Bananas to the UK[37]

Costa Rica and the Windward islands are two different successful examples of contracting with international firms to export bananas to the UK. These countries allowed multinational firms to: (i) either buy farms or simply provide capital and technical assistance to locally established farms, and (ii) market the products in the UK under their own brand names.

a) Costa Rica

Geest International, a UK based multinational specializing in bananas, established four banana plantations employing 2,000 employees in Costa Rica in 1993. The farm workers were trained by Geest and the bananas are marketed under the brand name Tropican Eden, the Geest symbol for Central American fruits. Geest preferred Costa Rica because of its ideal conditions for growing bananas and its favorable political, macro and microeconomic environments. Fruits mature more quickly with better quality in Costa Rica than in West Africa due to the favorable intensity of sunlight.

---

[37] This section was drawn from information provided by Geest Inc.

b) Windward Islands

The Windward Islands comprised of the independent sovereign states of Dominica, Grenada, St. Lucia and St. Vincent lie 3,000 miles from the UK in the eastern Caribbean. After the demise of the sugar industry in 1952, the governments offered an exclusive contract to Geest International to purchase and export all bananas of exportable quality produced by many small growers in the islands. Currently, the islands supply almost 60% of the total UK market for bananas. The fruit is grown on nearly 20,000 small farms (50% of the total population are employed). The growers are trained by Geest to produce quality fruit and pack it in the field for direct shipment to London markets. The growers are organized into associations under an organization called WINBAN (The Windward Island Banana Growers Association) which negotiates with Geest over contractual terms, volume, prices, etc. WINBAN also engages in research to improve production and marketing technologies. Geest contacts WINBAN three days before its' ships arrive in the islands. WINBAN then sends radio messages to its growers who cut, grade and pack the fruit that is ready for export. WINBAN inspects and assures the quality prior to shipping to Geest warehouses in the UK. The fruit is transported using refrigerated ships and transferred directly into Geest's temperature controlled vehicles for delivery to the ripening center and then to retailers.

The Costa Rican and the Windward Islands examples provide the following lessons:

- The governments of Costa Rica and the Windward Islands had limited but direct involvement with a multi-national firm to promote exports.
- Small producers organized themselves to negotiate and lobby for Windward bananas.
- The development of cold storage facilities was highly useful.
- A strategic alliance with an international firm facilitated the transfer of technology and ensured a marketing outlet for the produce.

VII. Summary and Policy Implications

1. Summary: Potential and Constraints

This review has highlighted a number of advantages and limitations that Gambian horticultural producers face in producing and servicing alternate markets, including European markets, for fresh fruits and vegetables. Gambia does offer a promising tropical climate, a high water table, and good soil texture in peri-urban Banjul. Relatively low cost labor, remarkably good tele-communications and close proximity to European markets reinforce the advantages that the natural resource potential offers to Gambian producers.

Nevertheless, serious constrains exist which will continue to control the pace of horticultural production and the country's potential to serve alternative markets such as in

Europe. Physical infrastructure problems are very important along with inadequate and unreliable air and sea freight facilities. There is no public cold storage facility at the airport so the larger commercial farms have been induced to plan and build their own facilities. Without these facilities, the risk of "tarmac spoilage" is high because of the irregular air cargo services. More demanding quality control requirements in Europe make it increasingly difficult for The Gambia, especially for the smaller producers, to compete unless they have assured access to a cold chain marketing system.

There is a visible lack of government support for research and extension for these crop activities. The larger producers, in effect, finance their own research and ad-hoc experiments. They are influenced in part by their private overseas network of suppliers and buyers, and advice from related family firms regarding the seed varieties and cultivation practices. They also seek out information about marketing alternatives abroad.

Information constraints are serious for most producers, especially for small producers who have imperfect knowledge about European markets in terms of non-Gambian competitors, new market niches, outlets, agents and prices. In addition, Gambian exporters must continually monitor changing product standards, labelling, and packaging requirements across EEC countries to maintain their competitive edge. There is no better way to reduce these informational constraints than focussed trips to key European countries, but this is impossible except for the largest producers. The government and GAMHOPE, the horticultural producers and exporters association, could play an important role in furthering this process of learning by financing (in whole or in part) foreign trips by Gambian producers to attend marketing and packaging workshops and trade fairs in selected European countries. In addition, this would also help to obtain market information, and to build up networking contacts and possible strategic business alliances and joint ventures.

2. The Financial Dimension: Summary

The mixture of opportunities and constraints outlined above has created a dual structure of horticultural producers/exporters in the country. On top are a handful of big operators who have largely self-financed their successful entry into European markets through earnings from other business ventures or related family enterprises. These are the only producers that export to European markets on a sustained basis. Next are a mixture of medium to small producers, some of whom have sporadically exported to Europe, but not on a sustained basis. These producers currently produce for the hotel market in the tourist sector or as occasional outgrowers for the large producers/exporters. The smaller horticultural producers are supported in part through NGO programs, especially women's groups, and produce exclusively for the domestic wholesale, retail and hotel markets.

Financial support for the horticultural subsector is relatively straight forward and uncomplicated: self-finance and informal finance predominate. Start up investment costs are financed through equity (self) finance. This is logical because banks cannot be expected to place their depositor and stockholder funds at risk by issuing investment loans to untested businesses

in an area as risky as horticultural exports. This role is better served by venture capital firms that make equity investments in risky enterprises, but also introduce production and management expertise. The largest horticultural enterprises are able to obtain conventional overdraft facilities to service part of their short-term operating expenses, but not for overseas shipments or investment projects. It is also important to note that the largest firms with established overseas networks and offshore banking relations can obtain offshore letters of credit to finance their shipments to Europe. It is also important to note that large producers and even medium sized operators, to greater or lesser extent, provide financing to the subsector by selling their produce on consignment in local as well as in export markets. In effect, they offer supplier credit to their buyers for one to four weeks before receiving payment. Ironically, therefore, producers have to finance much of their own production costs as well as others in the marketing channels.

Smaller producers necessarily engage in self-finance and to some extent use informal sources of finance. Supplier credit and consignment sales are, however, much less common among these producers because they expect their buyers to pay in cash or barter. Cooperatives and NGO gardens get donor subsidies to start up or expand their operations, while indigenous kafo gardens draw on kafo funds mobilized locally from the kafo members.

In short, at present, formal financial sources within The Gambia have played a minor role in financing the horticultural subsector.[38] Only conventional overdraft facilities are available for traditional short-term financing for the largest producers. Less expensive off-shore financial centers in the UK provide the occasional letters of credit used to secure export shipments for those few producers with established overseas banking relationships. Start up and investment costs are financed largely through earnings from other business activities and accumulated retained earnings. Self-financing is even more pronounced for medium and small sized firms.

It is unrealistic to expect domestic commercial banks to assume the risks of financing the investment costs of horticultural exporters in The Gambia given the current uncertainty of returns for all but the largest producers. Even for the large producers, it is unlikely that domestic banks will move beyond their current conventional overdraft financing into project-oriented term loans for which repayment would be subject to greater default risks. This is legitimately the area for venture capital from the owner-entrepreneurs themselves or in joint ventures with foreign partners. Franchising, joint ventures and strategic alliances with international firms may facilitate local exporters to obtain the necessary finance in addition to obtaining production, management, processing, and marketing technology needed to compete in European markets.

---

[38] Some of the commercial farms, however, were benefitted indirectly by the loans from GCDB issued for enterprise development.

3. Policy Recommendations

Government initiatives could make useful contributions in the area of information acquisition and dissemination and infrastructure investments. For example, the government in partnership with GAMHOPE could support trips by promising horticultural entrepreneurs to participate in trade fairs, and marketing and packaging workshops offered in selected European countries. This would allow them to build up a network of contacts and potential marketing agents in Europe. At the same time the government could consider a joint venture to build or expand the planned cold storage facilities at the Banjul airport. This should be done only if private producers are willing to at least match government contributions so there is a commitment to manage it on a commercial basis.

The government should make an effort to more carefully document the flow of horticultural exports in a systematic and timely fashion. Currently, an accurate, comprehensive and up-date record of Gambian horticultural exports is not in place. This could facilitate the marketing agents knowledge of growing or shifting product markets as well as keeping public authorities informed about the progress of this country's non-traditional export efforts.

The nature of the trends in foreign markets requires improvement in R&D efforts and in the availability of quality seeds. The government can play an active role in supporting research efforts that are directed toward the development of crop varieties with long shelf-life. This is especially important for London supermarkets that do not pack ice around their fresh produce. The Government can also lobby for Gambian exporters in European markets following the examples of Israel, South Africa, Morocco. Furthermore, impediments to exporters who prefer to engage in outgrower contracts should be removed and labor should be protected through minimum wages and minimum safety requirements on commercial farms.

In summary, the success or failure of the new non-traditional horticultural export sector will rest on the entrepreneurial skills of the participants themselves. A dual market with the largest firms engaging in exports while medium to smaller firms servicing the hotel and domestic market in peri urban Banjul will likely continue its natural evolution into the foreseeable future. Successful export activities often depend on prior or parallel developments in domestic markets. Export enclaves may be difficult to sustain in the long run unless the producers are engaged in learning how to provide quality products for the domestic markets. Jaffee (1993) shows that the Kenyan export development was built upon many years of domestic market experience. The Gambian domestic market is, however, very thin. It does not require large farms that often dump export rejects into local markets to meet its needs. It seems that it will take The Gambia a long time to develop its export potential by following the Kenyan example.

Equity capital (self-finance) will logically continue to predominate either individually or through joint ventures between local and foreign partners. Slow improvements in domestic financial markets suggests that foreign equity capital and loans will be crucial. NGO finance can make an important contribution to smaller NGO and kafo gardens but it is unlikely that these efforts will succeed in doing much more than improving nutrition and providing some marginal

income to women. Realistically, local bank finance can only play a modest short-term working capital limited to the largest entrepreneurs through overdraft facilities. Investment finance in this riskier area can only logically be serviced through self-finance, retained earnings, venture capital and joint initiatives such as franchising and strategic alliances.

Finally, The Gambia should focus on niche markets, ethic and seasonal, in European markets.

REFERENCES

Abt. Associates, "Europe's Single Market: Implications for Agricultural Exporters from North Africa and the Near East," APAP II Collaborative Research Report No. 350, Washington, D.C., 1993.

Bojang, Sheriff, "YAMS: A Farm with a Difference," Daily Observer, April 2, 1993, p. 6.

Buckley, Katherine, "The World Market in Fresh Fruits and Vegetables, Wine and Tropical Beverages - Government Intervention and Multilateral Policy Reform," USDA, Washington, D.C., September 1990.

DeCosse, Philip and Ebrima Camara, "A Profile of the Horticultural Subsector in The Gambia," Paper presented at the National Horticultural Policy Planning Workshop, Kairaba Beach Hotel, December 3-5, 1990.

Geest, PLC., "The Fresh Produce Report," Spalding: United Kingdom, 1988, 1989 and 1990.

Geest, PLC., "Fresh From the Tropics: The Story of Geest Bananas," Spalding: United Kingdom, 1992.

Graham, Douglas, Richard L. Meyer and Carlos E. Cuevas, eds., " A Review of Formal and Informal Finance in The Gambia, 1981-1991: Markets, Institutions, Programs and Policies," Columbus: The Department of Agricultural Economics and Rural Sociology, The Ohio State University, January 1993.

Jaffee, Stephen M., "How Private Enterprise Organized Agricultural Markets in Kenya," Working Paper Series No. 823, Washington D.C.: The World Bank, 1992.

Jaffee, Stephen M., "Exporting High-Value Food Commodities: Success Stories from Developing Countries," Washington D.C.: The World Bank, Discussion Paper 198, 1993.

Meyer, Richard L. and Derek Meyer, "Glossary of Terms for Agricultural Insurance and Rural Finance," FAO: Agricultural Services Bulletin No. 100, 1992.

Nagarajan, Geetha, Douglas H. Graham and Richard L. Meyer, "Insurance and Financial Intermediation through Self-Help Groups (Kafos) in Peri-Urban Gambia," Report Submitted to the USAID Mission in the Gambia, The Ohio State University, January 1994a.

Nagarajan, Geetha, Douglas H. Graham and Richard L. Meyer, "Financial Intermediation through ROSCAs in Peri-Urban Gambia," Report Submitted to the USAID Mission in the Gambia, The Ohio State University, January 1994b.

Nagarajan, Geetha and Richard L. Meyer, "Incorporating Finance into a Modified Subsector Framework as Applied to the Fertilizer Subsector in The Gambia," Columbus: The Department of Agricultural Economics and Rural Sociology, The Ohio State University, ESO No. 2080, September 1993.

Nagarajan, Geetha and Richard L. Meyer, "A Conceptual Framework to Study Agri-Business Subsectors in Developing Countries," Columbus: The Department of Agricultural Economics and Rural Sociology, The Ohio State University, Working Paper, August 1994.

National Agricultural Sample Survey (NASS), Department of Planning, Ministry of Agriculture, Government of The Gambia, 1992.

Nyoro, James K., "Production of Export Horticultural Crops in Kenya," Paper Presented at the Conference on Agricultural Exports and Market Development, Egerton University, Kenya, June 23-24, 1993.

Roth, Michael, "Land Markets and Intra-Household Access to Resources and Income Opportunities, Research Methodology: The Case of Non-Traditional Export Crops in The Gambia," Madison, University of Wisconsin, Land Tenure Center, 1993.

USDA, "Trade Report, Situations and Outlook Series," Washington, D.C., Nov. 1990 and Oct. 1991.

Table 1. Value of Imports of Fresh Fruits and Vegetables by Selected European Countries and the World, 1985-1990. (in US $)

Years	Germany	UK	France	World
1985	2,397.4	1,382.7	1,498.9	14,754.2
1986	3,213.4	1,776.3	2,017.4	18,093.1
1987	4,124.4	2,130.6	2,413.1	21,307.5
1988	4,144.1	2,386.8	2,512.6	22,911.7
1989	7,796.8	4,430.1	4,284.8	na
1990	10,530.2	5,260.5	5,310.1	na

Source: Buckley (1990); USDA (1992).

Table 2. Value of Exports of Fresh Fruits and Vegetables by Selected African Countries to European Countries, 1985-1988. (in US $)

Years	South Africa[a]	Morocco[a]	The Gambia
1985	223,967	196,429	23
1986	304.010	264,174	73
1987	358.770	258,690	433
1988	393,550	266,484	975

a South Africa and Morocco are the only African countries among the 15 major exporters of fresh fruits and vegetables in the world.

Source: Buckley (1990); USDA (1991); Ministry of Finance and Economic Affairs, The Gambia.

Table 3. Share of Horticultural Sector in Total Agricultural Exports of The Gambia, 1984-1989.

Years	Total Agricultural Exports[a] ('000D)	Horticultural Exports[b] ('000D)	% Share of Horticultural Exports to Total
1984-85	78,810	163	0.2
1985-86	86,216	177	0.2
1986-87	76,007	584	0.8
1987-88	94,493	3,458	3.7
1988-89	85,802	7,787	9.1

a Includes export of groundnut & groundnut products, cotton, palm kernels, fishery products, hides & skins, meat products, horticultural products and soft drinks.
b Includes fresh fruits and vegetables.
Source: Ministry of Finance and Economic Affairs, The Gambia.

Table 4. Value and Volume of Fresh Fruits and Vegetables Exports to European Countries from The Gambia, 1990-1992.

	1990/91		1991/92	
Country	Quantity (tons)	Value ('000D)[a]	Quantity (tons)	Value ('000D)
Belgium	18	116	3	32
Denmark	42	223	-	-
Germany	4	15	21	153
Holland	8	61	12	104
Sweden	54	284	40	372
Norway	-	-	1	9
France	-	-	5	69
UK	1,621	10,252	2,154	13,853
Total	1,747	10,951	2,236	14,593

a 1 D = US$ 8.9.
Source: Ministry of Trade, Industry and Employment, The Gambia.

Table 5. Number of Tourists Visiting The Gambia, 1981-1993.

Year	Number of Tourists[a] (in '000)
1980-81	21.3
1981-82	17.1
1982-83	27.8
1983-84	36.7
1984-85	49.3
1985-86	50.8
1986-87	48.5
1987-88	49.9
1988-89	54.4
1989-90	57.1
1990-91	58.1
1991-92	90.1
1992-93[b]	71.1

a British, Swedish and German tourists account for 75% of the total tourists visiting The Gambia.
b Estimated number.
Source: Central Statistics Department, The Gambia.

Table 6. Roster of Participants Sampled and Interviewed from the Horticulture Subsector in The Gambia and UK.

Categories of Participants			Number of Respondents
1.	**Producers**		
	a.	Commercial farms	10
	b.	Cooperatives	2
	c.	Donor gardens (communal)	8
	d.	Non-donor communal gardens (kafos)	9
	e.	Individual gardens	5
2.	**Marketers**		
	a.	Suppliers to hotels	7
	b.	Market vendors (retail)	45
	c.	Mařket vendors (wholesale)	5
3.	**Consumers**		
	a.	Exporters	8
	b.	Senegalese traders	1
	c.	Hotels/restaurants in The Gambia	7
	d.	Importer in UK	1
	e.	Supermarkets in UK	2
	f.	Ethnic market in UK (Indian)	1
	g.	Wholesale market in UK	1
4.	**Financial Agents**		
	a.	Formal financial intermediaries (MERIDIAN, Std. chartered)	2
	b.	Informal groups (osusus)	32
	c.	Moneykeepers	4
	d.	NGOs	3
5.	**Transport and Communication**		
	a.	Air-cargo agent (REDCOAT)	1
	b.	Telecommunications (GAMTEL)	1

Source: OSU Survey, 1993.

Table 7. Area, Crops Grown, Activities and Source of Finance for Major Commercial Farm/Exporters in The Gambia.

Name of the Farm	Year Started	Area Operated (ha.)	No. of Workers Employed	Crops Grown	Activities	Source of Finance	
						Start-up	Operating
Radville	1986	400	1000-1800	Asian vegetables, melons, french beans, zucchinis, mangoes	Own production; buys from outgrowers; sells to local markets, hotels and hotel suppliers; export.	Parent company in UK	Parent company in UK
SIFOE	1981	125	400-650	Melons, eggplant, chillies, limes and mangoes	Own production; sells to local markets, hotels and hotel suppliers; exports.	Self-finance (holding company)	Self-finance (profits from other business activities)
GHE (Gambia Horticultural Exports)	1990	0	0	None	Buys from outgrowers; sells to local markets and exports.	GCDB	Occasional overdraft from Meridien; seeds on credit from Holland
Faraba	1985	13	5-27	Melons, chillies, okra, chrysanthemums	Own production; sells to local markets; outgrower to exporter; exported in 1986.	Std Chartered; Share holders	Radville gives inputs on credit
Pamona	1987	104	600-1300	Corn, carrots, cauliflower, onions, mangoes, grapefruit, lime, lemon, melons, beans, eggplant, okra, tomatoes, zucchini	Own production; buys from outgrowers; exports.	Punjab National Bank, India	Line of credit in local bank
Niamina Enterprises	1989	12.5	27	Mangoes, oranges, papaya, eggplant, chilies, tomatoes, cucumber, zucchini, cabbage, carrots, onions, okra	Own production; sells to hotels and local markets; outgrower for exporter.	Self-finance	Profits from other businesses

(Continued)

Table 7. Area, Crops Grown, Activities and Source of Finance for Major Commercial Farm Exporters in The Gambia, (continued).

Name of the Farm	Year Started	Area Operated (ha)	# of Workers Employed	Crops Grown	Activities	Source of Finance	
						Start-up	Operating
YAMS	1989	240	200	Irish potato, onions, chilies, okra	Own production, sells to local markets, hotels and hotel suppliers, outgrower for exporter, exporter	Self-finance	Self-finance
Tambato	-	20	40	Okra, eggplant, chilies, tomatoes, onions	Own production, buys from outgrowers, sells to hotels and hotel suppliers, and outgrower to exporters.	Self-finance	Self-finance
Sinchu	1988	100	14	Eggplant, chilies, okra, onions	Own production, sells to local markets; exported until 1991	Self-finance	Self-finance
Farrato	1988	64	22-70	Okra, chilies, cabbage, tomatoes, eggplant, snow-peas, lettuce, cucumbers, beans, potatoes	Own production, buys from outgrowers, sells to hotels, exported until 1991	Self-finance	Self-finance

Source: OSU Survey, 1993.

Table 8. Classification of Large Commercial Farms by Type of Activities Performed.

Types		Sampled Farms
I.	Export using own production and outgrowers	Radville, SIFOE, YAMS, Faraba, Pamona, Farato, Sinchu, Hortmarc
II.	Export using outgrowers only (no own production)	GHE
III.	Produce and contract outgrowers to sell to exporters (no direct own exports)	Niamina, Tambato

Source: OSU Survey, 1993.

Table 9. Type of Clients and Mode of Payment to Clients by Major Commercial Farm Exporters in The Gambia.

Name of the Farm	Clients	Outgrowers/ Contract Farms	Finance to Clients	Price Setting	Importing Agent	Approximate Volume of Exports (1992)
Radville	UK, local market, hotels, hotel suppliers, outgrowers	Buys from HORTMARC local producers, Faraba, YAMS	Outgrowers: Inputs on credit	Fixed by Radville for local markets; fixed by parent company for importers	Parent holding company in UK	2000-2500 tons per year (99% of production)
SIFOE	Germany, Holland, Belgium, Sweden, London, local market, hotels, hotel suppliers	None	Supplier credit to importers (1-2 months); Supplier credit to hotels & hotel suppliers (2-4 weeks)	Fixed by SIFOE	Several importers in UK wholesale market (wholesalers in New Covent Garden)	$4.0 millions per year (92% of production)
GHE	UK, local markets, outgrowers	Buys from Lamin Cooperative, local producers, Niamina Farms	Provide seeds on credit to outgrowers; supplier credit to importers (1 month)	Importer gets on consignment; negotiable at local market level	Several wholesalers in UK wholesale market	Not available (60% of procurement); rest in local markets
Faraba	Used to export to UK; local markets, outgrower to Radville	Outgrower to Radville	None	Fixed by buyers but negotiable	Used to be a wholesaler in UK market	None direct
Pamona	UK, outgrowers	Buys from Lamin cooperatives	Supplier credit to buyer in UK (2-4 weeks)	Fixed by importers/ distributors in UK	Importer/distributing firm in UK	Not available (100% of production)
Niamina Enterprises	Local markets, hotels, hotel suppliers, GHE	Outgrower to GHE	Supplier credit to hotels (1-2 mo.); supplier credit to GHE (1-2 mo.); supplier credit to hotel suppliers (2-4 weeks)	Fixed by Niamina	Not applicable	None direct

(Continued)

Table 9. Type of Clients and Mode of Payment to Clients by Major Commercial Farm Exporters in The Gambia, (cont.).

Name of the Farm	Clients	Outgrowers/ Contract Farms	Finance to Clients	Price Setting	Importing Agent	Volume of Exports
YAMS	UK, local markets, hotels, hotel suppliers, Radville	Outgrower to Radville	Supplier credit to importer (3 mo.); supplier credit to hotels and hotel supplier (2-4 weeks)	Fixed by Radville; fixed by importer; market prices	Wholesale agent in UK market	70-100 tons/yr.
Tambato	Hotels, outgrowers, HORTMARC	Outgrowers to HORTMARC	Supplier credit to hotels (3-6 weeks); supplier credit to hotel suppliers (1-2 weeks)	Fixed by Tambato	Not applicable	None direct
Sinchu	Formerly UK; sells to local markets	None	Supplier credit (1 weeks)	Fixed by Sinchu	Used to use partner in UK	None direct
Farrato	Formerly UK; outgrowers, hotels	Buys from local producers	Supplier credit to hotels (1 month)	Fixed by hotels but negotiable	Used to use wholesalers in market	None direct

Source: OSU Survey, 1993.

Table 10. Two Horticultural Cooperatives in The Gambia: Characteristics and Operational Features.

Features	Bakau Society	Lamin Society
1. Year Started	1987	1987
2. Sponsors	Norwegian government British High Commission	Norwegian government
3. Size of the garden	9 ha. (7.5 operable)	15 ha. (4 operable)
4. Members	500 women	170 women
5. Share capital/member	D 10	D 100
6. Entrance fee/member	D 2.50	D 50
7. # of beds/member (1.5 x 5 meter beds)	10	7
8. Method for allotment of beds	Lottery	Lottery
9. Crops grown by each member (mandatory)	6 beds onion 4 beds cabbage	3 beds onion 1 bed eggplant 1 bed chili 2 beds tomatoes
10. Decision units for cropping & marketing scheme	Committee	Committee
11. Source of finance[a]		
a. fixed costs	Norwegian government	Norwegian government
b. variable costs	Norwegian grants until 1989; Members contribution to cooperative funds from 1990 [D50/yr/member]	Norwegian grants until 1989; Members contribution to cooperative funds from 1990 [D75/yr/member]
12. Source of technical assistance	Department of Agriculture, Government of The Gambia	Department of Agriculture, Government of The Gambia
13. Source of marketing outlet	Wholesaler in the Serrakunda market	Wholesaler in the Serrakunda market; Private exporter (GHE)
14. Net income earned/member	D1300-1500/yr	D1050-1200/yr
15. Export potential	Limited; can become outgrower	Limited; can become outgrower

a No osusus were reported among the cooperative members.
Source: OSU survey, 1993.

Table 11. **Area and Number of Participants in Individual, Non-Donor and Donor Communal Gardens in The Gambia, 1991.**

Item		Responses
1.	**Estimated total population of vegetable producers in village-based non-donor communal and individual farms**	54,646
	a. Male	4,641
	b. Female	50,005
2.	**Communal (non-donor) gardens**	
	a. Estimated total area (ha.)	287.6
	b. Estimated number of participants	21,678
	c. Proportion of vegetables marketed to total vegetables produced	58
	d. Average size of garden (ha.)	0.4
	e. Average number of participants/garden[a]	22 (74)[a]
3.	**Donor gardens**	
	a. Estimated total area (ha.)	201.8
	b. Estimated number of participants	23,142
	c. Average size of gardens (ha.)	1.7
	d. Average number of participants/garden	216 (91)[a]

a Figures in parenthesis gives percentage of women to total participants.
Source: NASS report, 1992; Philip Decosse, 1990; OSU Survey, 1993.

Table 12. Type of Suppliers, Expenditures and Mode of Payment for Fresh Fruits and Vegetables by Selected Hotels in The Gambia.

Hotel/Restaurant	Suppliers[a]	No. of Women Suppliers	Ordering Frequency	Approximate amount Spent per Week ('000 D)	Mode of Payment/Finance	Price Setting
1. Senegambia	Women (60%)[b] YAMS (40%)	25	Every 2 days	50-60	Supplier credit (2 weeks)	Negotiable
2. Sunwing	Women (50%) Farabo (50%)	4	Every day	16-20	Down payment	Fixed by hotels
3. Kolali (Scala restaurant)	One supplier in Bakau markets (100%)	None	Every day	12-14	Down payment & sometimes 1 week supplier credit	Seller's price but negotiable
4. Kairaba	Women (75%) Raville, YAMS, SIFOE } (25%)	25-30	Once a week	5-7	Suppliers credit (2 weeks)	Fixed by hotels
5. Amies Beach	Once supplier in the market (100%)[b]	None	Every day	2-2.5	Down payment & sometimes 2 week supplier credit	Seller's price but negotiable
6. Palm Grove[c]	Market (100%)	None	Every day	3.5-4	Down payment & sometimes 2 week supplier credit	Seller's price but negotiable
7. Atlantic	Radville (60-80%) Women (40-20%)	13	Every day	2.5-3 - Women 7-10 - Radville	Supplier credit (1 or 2 weeks)	Radville - Seller's price Women - Buyer's price

a Women refers to women who specifically supply to hotels and restaurants.
b Figures in parenthesis give share of that supplier in the total quantity procured by the hotel.
c It used to procure from women suppliers, but stopped during the past two years due to several problems with the women.
Source: OSU survey, 1993.

Table 13. Size of the Urban Markets and Sample for the Study.

Location of the Markets	Market Size[a]	Sample Size[b]
1. Banjul	2,000	12
2. Bakau	150	10
3. Serrakunda	2,500	20
4. Sukuta	150	6
5. Brikama	1,700	18

a This column gives the average number of participants, retailers and wholesalers in the market. This includes all vendors such as food, cloth, utensil and fruits and vegetables sellers.

b This column reports the number of participants interviewed. They include only vendors of fruits and vegetables, both retailers and wholesalers.

Source: Market Master, Serrakunda who serves all the above markets (OSU Survey, 1993).

Table 14. Contractual Relations of Retail Traders with Their Suppliers and Buyers.

Items		Responses
1.	No. of sample retailers	45
2.	Markets sampled	Banjul, Bakau, Serrakunda, Brikama and Sukuta
3.	Gender (% of total sample)	
	a. Female	85
	b. Male	15
4.	Type of transactions with suppliers	
	a. Credit (% of contracts in sample)	72
	(i) Type of suppliers	wholesalers
	(ii) Average loan size (D)	650
	(iii) Average length of credit (days)	15
	b. Advance payment (% of contracts in sample)	6
	(i) Type of suppliers	foreign
	(ii) Average length (days)	10
5.	Type of transactions with regular buyers	
	a. Credit (% of contracts in sample)	16
	(i) Average loan size (D)	850
	(ii) Average length of credit (days)	15
	(iii) Average implicit int. rate (%/month)	15
	(iv) Type of clients	hotel suppliers, hotels
	b. Advance payment & consignment (% of contracts in sample)	0

Source: OSU Survey, 1993.

Table 15. Characteristics of Informal Financial Markets for Retailers.

Items		Responses
1.	Sample size	45
2.	Percent participating in informal financial markets	
	a. RoSCAs (osusus)	72
	b. Kafos	44
	c. Moneykeepers	8
3.	Characteristics of RoSCAs:	
	a. Ave. membership size	24
	b. Ave. contribution/member/meeting (D)	25
	c. Ave. length of drawing (days)	4
	d. Method of pot allocation	Fixed by order of recruitment
	e. Membership criteria	Occupation, gender, geographic proximity
4.	Characteristics of kafos:	
	a. Ave. membership size	68
	b. Ave. contribution/member (D)	20
	c. Membership criteria	Occupation, gender, geographic proximity, ethnicity

Source: OSU Survey, 1993.

Table 16. Volume of Cargo Transported by Redcoat from The Gambia to UK, 1992-1993.

Date	Kilos
October 1, 1992	12,962
October 26, 1992	15,377
November 3, 1992	14,172
November 24, 1992	20,644
November 27, 1992	11,134
November 30, 1992	37,290
December 8, 1992	38,456
December 13, 1992	39,074
December 15, 1992	39,096
December 18, 1992	37,784
December 22, 1992	38,424
December 28, 1992	39,938
December 29, 1992	39,011
January 8, 1993	40,512
January 18, 1993	39,826
January 19, 1993	39,651
January 26, 1993	39,044
February 3, 1993	39,578
February 9, 1993	34,810
February 16, 1993	32,282
February 23, 1993	39,967
February 28, 1993	30,453
March 7, 1993	31,325
March 14, 1993	37,015
March 23, 1993	35,639
March 28, 1993	32,011
April 4, 1993	27,798
April 14, 1993	24,493
April 18, 1993	23,821
Total	931,587 kgs.

Source: Redcoat, The Gambia.

Table 17. Summary of Activities of Large Commercial Farms in The Gambia.

Name of the Farm	Export Destination	Sells to Hotels (Name of the Hotel)	Sells to Hotel Suppliers	Sells to Local Markets	Sells to Exporters (outgrower)	Producer	Buys from Outgrowers	Market Technology[a]
Radville	UK	Kairaba, Atlantic	Yes	Yes	Radville	Yes	HORTMARC, Faraba, YAMS, Local producers	TVI/CVI; RPC
SIFOE	UK, Germany, Holland, Belgium, Sweden	Kairaba	Yes	Yes	SIFOE	Yes	No	CVI
GHE	UK	No	No	Yes	No	No	Lamin Coop., Local Producers Niamina	PMC
Faraba[b]	UK	No	No	Yes	Radville	Yes	No	CVI
Pamona	UK	No	No	No	No	Yes	Lamin Coop	TVI/CVI
Niamina	No	Fajara, Kotu Stand, Palmarima, Senegambia	Yes	Yes	GHE	Yes	No	PVI
YAMS	UK	Senegambia, Kairaba	Yes	Yes	Radville	Yes	No	CVI
Tambato	No	Kairaba, Atlantic, Senegambia	Yes	No	HORTMARC	Yes	Local producers	TVI
Sinchu[b]	UK	No	No	Yes	No	Yes	No	CVI
Farato	UK	Sunwing, Kairaba, Senegambia, Amies Beach	No	No	No	Yes	Local producers	TVI with PMC
HORTMARC[b]	UK	Yes	No	No	Radville	Yes	Tambato, local kafos	TVI with PMC

a TVI: taper vertical integration; CVI: complete vertical integration; PVI: partial vertical integration; PMC: production management contracts; RPC· resource providing contracts.
b Not a current exporter.
Source: OSU Survey, 1993.

Table 18. Levels of Asset Specificity, Uncertainty, Access to Finance and Information and Market Technology Followed by Various Producers in the Horticultural Subsector.

Items	Producers					
	Commercial Farms (C1)	Cooperatives (C2)	NGO Gardens (C3)	Indigenous Gardens (C4)	Medium Size Farms (C5)	Small Farms (C6)
1. Market technology used[a]	CVI; TVI; RPC; PMC	MSC; SM	SM	SM	SM; TVI; PMC, RPC	SM
2. Asset specificity due to type of crops produced	High to medium	Medium	Medium to low	Medium to low	Medium	Medium to low
3. Production and marketing uncertainty	High	High	High	High	High	High
4. Access to market information and technology	Good to modest	Poor to modest	Poor	Poor	Modest	Poor
5. Access to finance						
a. Offshore formal sources	Good	Poor	Poor	Poor	Modest	Poor
b. Supplier's credit	Good	Modest	Modest	Modest	Modest	Modest
c. RoSCAs & kafos	None	Poor	Poor	Good	Poor	Good
d. Friends and relatives	Good	Modest	Modest	Modest	Modest	Modest

a CVI: complete vertical integration; TVI: taper vertical integration; RPC: resource providing contracts; PMC: production management contracts; MSC: market specification contracts; SM: spot markets.

Table 19. Total Volume and Value of UK Fresh Fruit and Vegetable Market, 1978-1988.

Year	Volume (mill. tonnes)	Value (mill. pounds)
1978	11.1	2,378
1980	11.3	2,953
1982	11.6	3,586
1984	11.7	4,397
1986	12.5	4,634
1988	12.9	4,962

Source: Fresh Fruits and Vegetables Bulletin estimates, horticulture statistics, UK.

Table 20. Volume of Fresh Fruits and Vegetable Market in the UK and Per Capita Consumption of British Consumers, 1978-88.

Years	Total Volume (mil. tons)	Domestic Consumption (mil. tons)	Domestic Per Capita Consumption (lbs/yr)	Consumption by Catering Services (mil. tons)
1978	11.1	7.5	297	3.6
1979	11.3	7.4	292	3.9
1980	11.3	7.4	293	3.9
1981	11.3	7.4	291	3.9
1982	11.6	7.2	283	4.4
1983	11.6	7.1	279	4.5
1984	11.7	7.0	276	4.7
1985	11.9	7.0	276	4.9
1986	12.5	7.2	283	5.3
1987	12.5	7.0	275	5.5
1988	12.9	7.0	275	5.9

Source: National food survey, UK, 1991.

Table 21. Domestic Consumption of Fruits and Vegetables in the UK, (kg/head/yr.), 1980-1988.

	1980	1985	1988	% Change (1980-88)
Fruits				
Apples	12.3	10 8	11.2	-9.8
Pears	1.8	1.6	1.9	5.6
Peaches	0.5	1.3	1.7	70.6
Grapes	0.6	0.9	1.9	68.4
Citrus	8.2	9.0	11.4	28.1
Bananas	4.5	4.8	6.2	27.5
Exotics	0.3	0.5	0.9	66.7
Others	9.2	8.7	3.0	-206.7
Total Fruits	37.4	37.6	38.2	2.1
Vegetables				
Tomatoes	6.0	6.7	7.0	16.7
Cauliflower	5.2	5.2	5.0	-4.0
Carrots	7.7	8.5	8.6	10.5
Salads	2.8	3.1	3.5	20.0
Onions	6.4	6.7	6.8	5.9
Others	27.5	23.2	22.5	22.2
Total Vegetables	55.6	53.4	53.4	-4.1
Total Fruits and Vegetables	180.6	173.9	169.6	-6.3

Source: USDA, 1992.

Table 22. Some Major Imported Fruits & Vegetables in the UK.

	1978 (tonnes)	1988 (tonnes)	% Change (1978-88)
Asparagus	310	1829	+490
Aubergines	4200	5572	+33
Celeraic	44	846	+1823
Courgettes	3400	15,778	+364
Peppers	9700	41,455	+327
Apricots	1734	4426	+145
Avacadoes	4924	13,010	+164
Figs	97	454	+368
Grapes	54,100	111,289	+106
Mangoes	2000	10,140	+407
Melons	46,500	93,748	+102
Pawpaws		1363	na
Peaches & Nectarines	35,000	83,846	+140
Pineapples	7700	22,347	+190

Source: Customes & Excise Data/Fresh Fruits and Vegetables Bulletin Estimates, UK.

Table 23. Percentage Shares of Domestic Production and Imports in the Volume of Fresh Fruits and Vegetable Markets in the UK, 1978-1988.

Years	Domestic Production	Imports
1978	78	22
1979	77	23
1980	75	25
1981	74	26
1982	71	29
1983	73	27
1984	72	28
1985	73	27
1986	71	29
1987	69	31
1988	70	30

Source: Fresh Produce Report; Geest, 1990.

Table 24. Size of the European Market for Fresh Fruits and Vegetables (Excluding Potatoes), 1983-1989.

Years	Source			Total (mil. ton)
	Imports from Developing Countries	Intra-European Trade	Regional Trade	
1983	4.9	8.5	52.0	65.4
1984	4.8	8.5	51.1	64.4
1985	5.2	9.1	50.7	65.0
1986	5.5	9.5	52.2	67.2
1987	6.1	10.3	52.0	68.4
1988	6.7	10.6	50.7	68.0
1989	6.8	10.7	51.0	68.5

Source: The Fresh Produce Report no. 3, Geest International, 1991.

Table 25. Percentage Shares of Fresh Fruits and Vegetable Sales in the UK by Outlet Type, 1978-1988.

Outlet Type	1978 (%)	1988 (%)	1992 (%)
Farmshops & others (ethnic shops)	2.5	11.9	na
Market stalls in wholesale market	19.0	16.7	na
Green grocers in wholesale market	43.0	28.6	na
Cooperatives and other grocers	15.2	7.0	na
Supermarkets	20.3	36.0	44.0

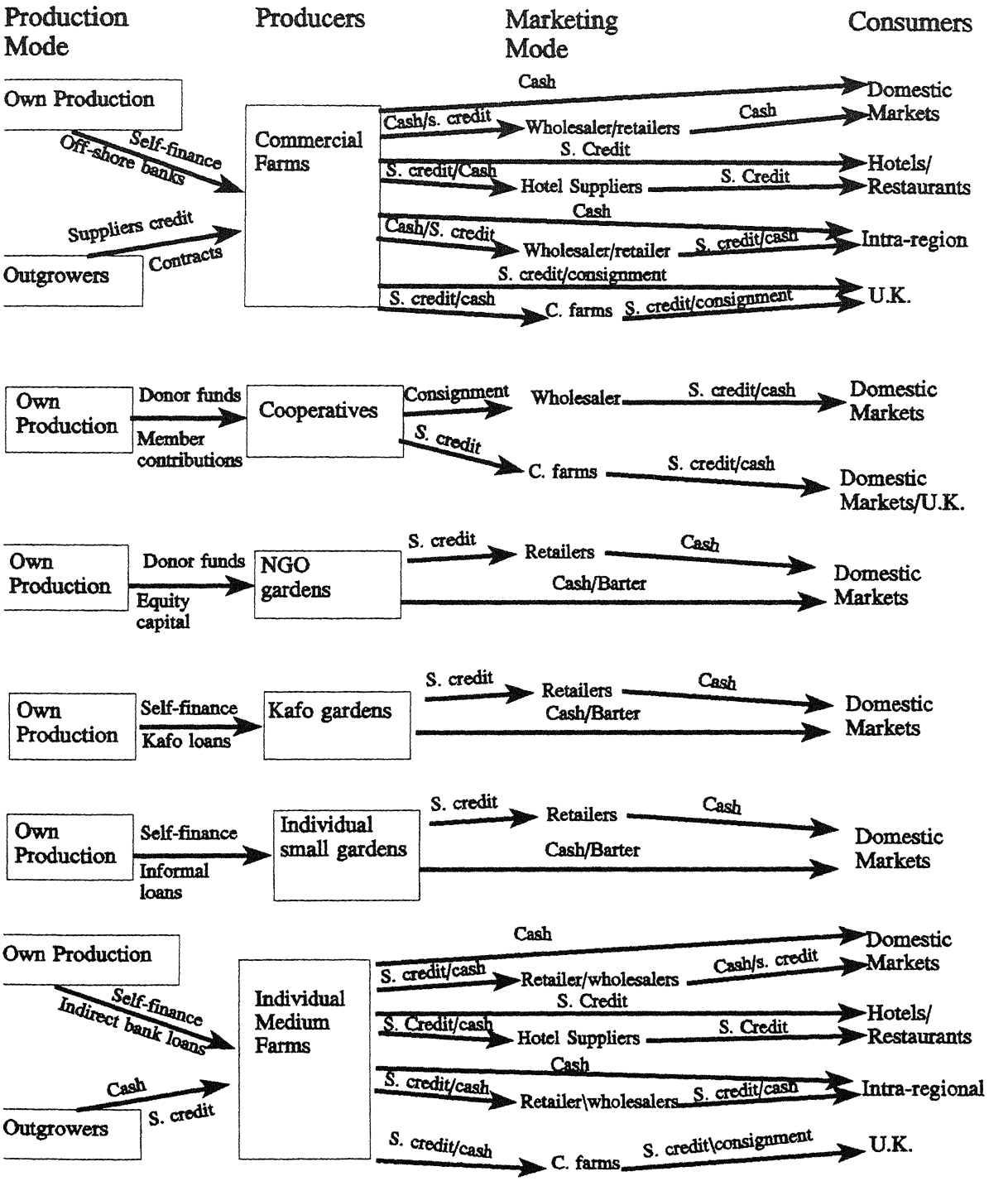
Source: Fresh Produce Report, Geest PLC, 1989-90.

Table 26. Organization Pattern and Potential of Various Types of Producers to Serve Alternate Markets.

Particulars	Commercial Farms	Cooperatives	Donor Gardens	Indigenous Kafo Gardens	Individual Medium Producers	Individual Small Producers
1. Sponsors	Self	Norwegian government	NGOs, American Embassy, EEC, etc.	Villagers	Self	Self
2. Participant gender	Mostly men	Women	Women	Mostly women	Mostly men	Mostly women
3. Ownership						
a. Vegetable beds	Producer	Individual member	Individual member	Individual member	Producer	Producer
b. Wells, fence, etc.	Producer	Collective	Collective	Collective	Producer	Producer
4. Decision making unit						
a. Cropping scheme	Producer	Committee	Individual member	Individual member	Producer	Producer
b. Marketing	Producer	Committee	Individual member	Individual member	Producer	Producer
5. Source of funds						
a. Fixed capital	Self-finance, Offshore	Donors	Donors	Communal funds	Self-finance	Self-finance
b. Working capital	Other business profits, equity	Member fees	Donors	Communal funds	Self-finance; limited bank loans	Self-finance
6. Potential to serve domestic hotels	Good	Good	Modest	Modest	Good	Poor
7. Potential to serve intra-regional markets	Good	Modest	Poor	Poor	Good	Poor
8. Potential to serve European markets	Good	Poor (can be an outgrower to an exporter)	Poor	Poor	Modest (can be outgrowers to exporters)	Poor
9. Market technology	Complete to quasi-vertical integration; contractual arrangements	Spot markets; market specification contracts	Spot markets	Spot markets	Spot markets to quasi vertical integration; contractual arrangements	Spot markets

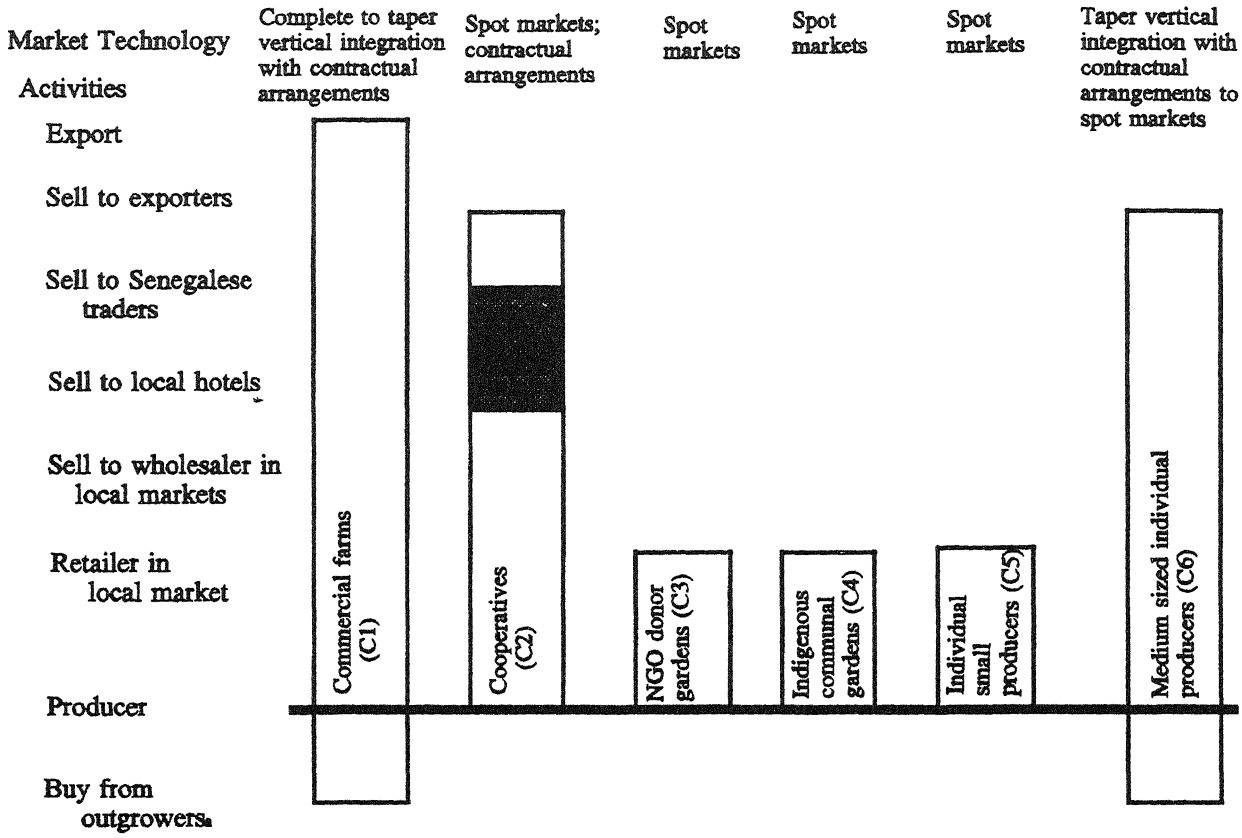
Source: OSU Survey, 1993.

Figure 1. Commodity and Financial Flows Through Various Channels in the Horticultural Sub-sector



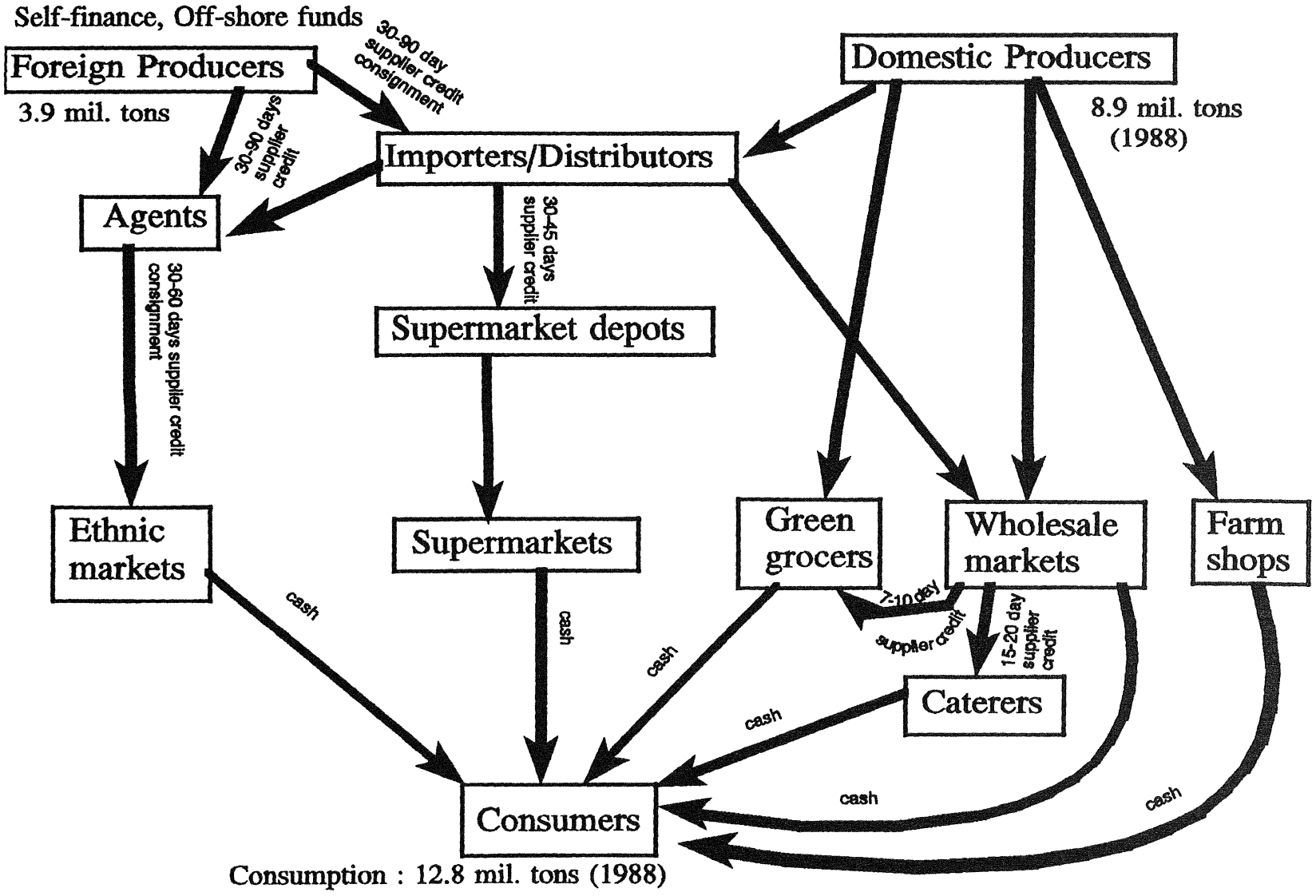
Key: C. farms: Commercial farms, S. credit: supplier's credit.

Figure 2. Activities and Market Technologies of Various Channels in the Horticultural Subsector.



[a]Outgrowers include cooperatives, other commercial farms, individual small and medium producers.
: Not involved in the activity.

Figure 3. Channels for Fresh Fruit & Vegetable Marketing in the UK.



Appendix 1. Change in Shares of Different Sectors in Domestically Produced Exports in The Gambia, 1984-1989.

Sector	1984/85 (%)	1988/89 (%)
Groundnut & Groundnut Products	80.1	56.1
Fisheries	11.3	23.5
Horticultural Products	0.2	9.1
Other Agricultural Products	8.4	11.3

Source: Agriculture and Natural Resources in The Gambia, USAID, Banjul 1991. (p. 20)

APPENDIX 2

C O N F I D E N T I A L

April 1991

SPECIFICATION FOR YELLOW HONEYDEW MELON

RAW MATERIALS

Variety/Types	F1 Hybrids are preferred.
Sources	Spain, Israel, Brazil, Venezuela, South Africa.
Condition	Fruit should be clean and free from surface contamination by soil, spray deposits or extraneous matter. It should not be waxed. It must be intact, sound both internally and externally and be selected so that it will remain in good condition following packing, transportation and customer handling and provide a reasonable shelf and after sale life.
QUALITY REQUIREMENTS AND TOLERANCES	
Harvesting	Fruit must be carefully clip picked flush with the fruit surface.
Maturity	Fruit must be fully developed, ripe and firm, not soft, wilted or overmature.
Shape	Fruit should be round to ovate, not excessively elongated. Main Season Polar diameter should not exceed equatorial diameter by more than 30% see illustration in Appendix. Tolerance 10% by count Early Season (Almeria-Spain) Polar diameter should not exceed equatorial diameter by more than 50% Tolerance 5% by count.

Appearance	Surface texture should be smooth. A light degree of surface netting or sugar cracking is permitted provided the fruit is fully coloured; fruit showing open cracking whether healed or not - tolerance nil.
Internal Characteristics	The centre cavity should be full of seed. If the airgap exposed when the melon is cut equatorially exceeds 3cm, when measured from apex to apex of the seed moulds, this will be a reason for rejection if found in more than 10% of fruit cut. See diagram in Appendix.
Colour	Should be uniform deep yellow. Fruit showing green or white colouration is not permitted. Tolerance for colour 10%.
Taste/Texture	Fruit should be sweet and juicy and free from any taints or odours which may impair customer acceptability. The preferred sugar level should be 12% or above. Absolute minimum sugar level 10%. Tolerance below this - 10%.
Progressive Defects	Fruit should be free from defects which could cause active rot or subsequent deterioration as follows: i) Bruise, cuts and splits - Tolerance 5%. ii) Lesions caused by fungi, such as Anthracnose or Fusarium - Tolerance nil. iii) Injuries caused by insects, rodents or birds. Tolerance nil.
Non-Progressive Defects	Fruit should be substantially free of defects which affect the appearance or edibility of the fruit, as follows: a) Hail damage - not permitted. Tolerance nil. b) Light rub marks or scars (excluding sugar cracking). Maximum area alone, or in aggregate, 70mm in diameter, and no more than 10% of fruit should be affected. The aggregate tolerance should not exceed 15%.

PRESENTATION/PACKING

Packing

Outers should be of cardboard construction and give a nominal tray weight of 10kg. Trays must be checkweighed to ensure 9.5kg net upon arrival at Depot. Tolerance nil below these weights. Early season Spanish (Almeria) 9.0kg.

Weight and Count

The weight range of individual fruits should be as follows:

	Count	Minimum Weight	Maximum Weight
	7	1.3kg	1.6kg
Early Season Spanish (Almeria)		1.2kg	
	8	1.1kg	1.3kg
Early Season Spanish (Almeria)		1.0kg	

LABELLING

- Fruit

Individual fruit labels of standard design, with bar code, should be affixed to the surface of the fruit and must be printed with the country of origin, display until date and supplier code.

- Box End

Each outer should contain the following information which must be clearly legible. It may be incorporated into the box design or included on a separate adhesive label, positioned on one of the shorter sides of the container.

a) Department, Commodity numbers and Pack Size

b) Commodity description, eg Yellow Melons.

c) Country of Origin

d) Class

e) Total net weight of fruit

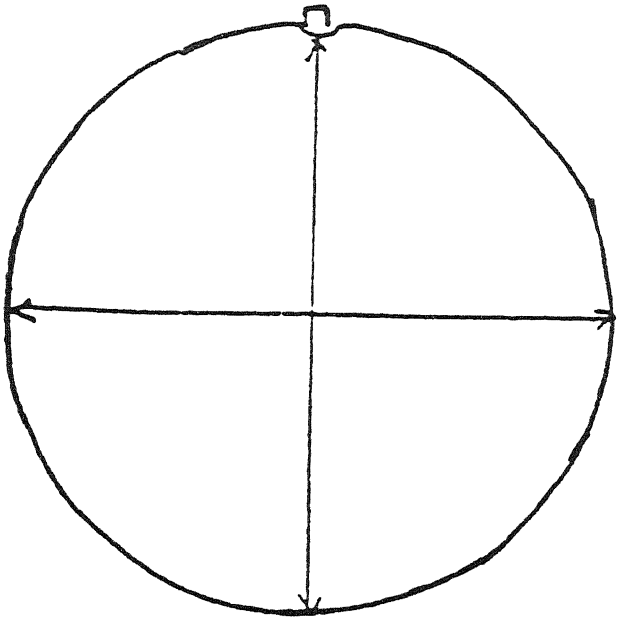
f) Supplier name and address
Supplier code.

g) Display Until Date code ie day of arrival at Depot plus 4 days, written as eg "Display until JUL 07"

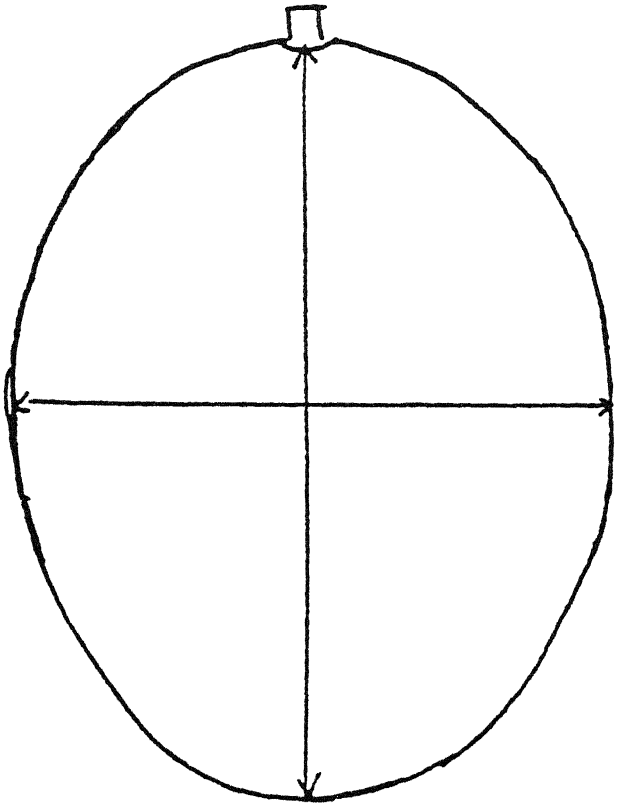
label packhouses for fruit packed and labelled in Spain packing plus 10 days.

A P P E N D I X

Diagrams to illustrate Melon shape:



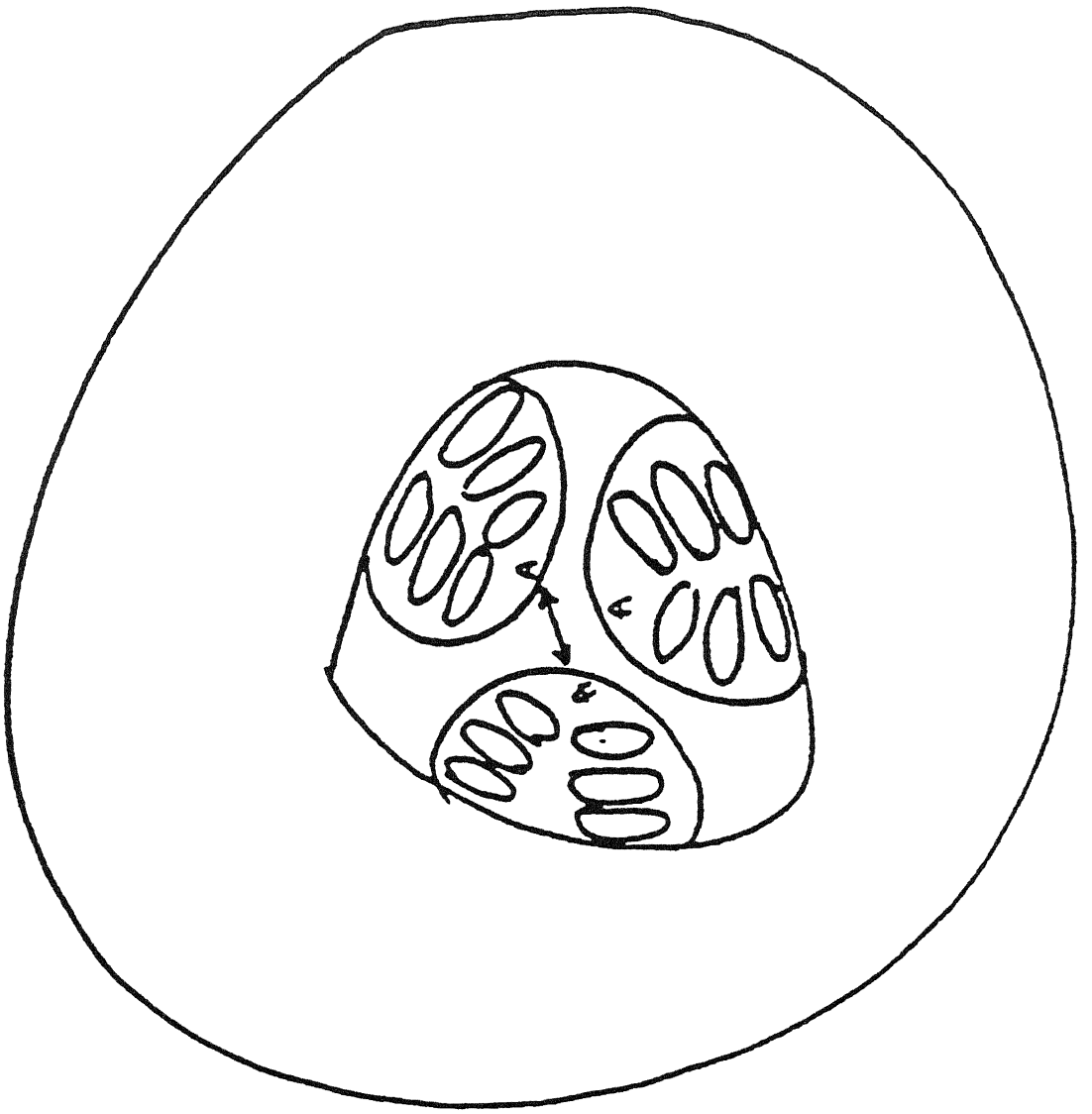
Polar and equatorial diameter equal.



Polar diameter greater than equatorial diameter by 30%.

APPENDIX

Cross Section - Yellow Melons:



'A' = APEX of the seed mounds, the gaps between A should not exceed 3cm.

APPENDIX 3

J.O. SIMS Ltd

J. O SIMS LIMITED - PESTICIDE POLICY

The following policy must be strictly adhered to Failure to comply in any respect will render the produce unacceptable.

1 Spray programmes must be geared to minimal use of crop protection chemicals to achieve the standard of pest, disease and weed control required.

2 The application of post-harvest chemicals or other additives must be geared to minimal use to achieve the required objectives

3 Only pesticides approved in the country of application may be used. A non-approved trade product with the same active ingredient as the approved product is not allowed. (It is the product that is approved not just the active ingredient).

4 Suppliers should provide J. O. Sims with details of trade products and active ingredients which may be used on the crop.

5 No pesticides prohibited from use in the U.K. shall be used on any crop to be supplied to J. O. Sims (see attached list).

6 Manufacturers label recommendations must be strictly adhered to and the product used as directed.

7 Harvest intervals must be observed at all times

8 Tank mixes may only be used when components are listed by the manufacturer as compatible.

16 Winchester Walk, Borough Market, London SE1 9AQ Telephone 071-407 0756. Fax: 071-403 4889 Telex 885386
Spalding Spalding, Lincolnshire PE11 2BB Telephone 0775 762271 Fax. 0775 762132.

9 Only one product may be used for each targeted pest/disease on each occasion A second similar product must not be applied within the recommended interval of application for the first product used

10 Where J. O. Sims advises that the use of a product or active ingredient is to be restricted or to cease, the ruling must be observed

EQUIPMENT/PERSONNEL

1 All crop protection chemicals and post-harvest treatments must be applied with suitable well maintained and correctly calibrated equipment.

2 All personnel involved in the application of crop protection chemicals or post-harvest treatments must be suitably trained.

3 All personnel involved in recommending or supplying chemicals must be fully conversant with all regulations, restrictions, practices and label recommendations.

Appendix 4. Reference Price Application Periods.

Reference prices are applied to some fruit and vegetable products imported into the EC, differentiated by season and quality standards, as follows:

- Apples July 1-June 30
- Apricots June 1-July 31
- Artichokes Nov. 1-June 30
- Cabbage Lettuce Nov. 1-May 31
- Clementines Nov. 1-end February
- Courgettes April 21-Sept. 30
- Cucumbers Feb. 11-Nov. 10
- Eggplant April 1-Oct. 31
- Endives Nov. 15-March 31
- Grapes, table July 21-Nov. 20
- Lemons June 1-May 31
- Mandarins Nov. 1-Feb. 29
- Orange hybrids Nov.-end February
- Oranges, sweet Dec. 1-May 31
- Peaches June 11-Sept. 30
- Pears July 1-April 30
- Plums - Group 1 June 11-Sept. 30
  Group II Aug. 1-Sept. 30
- Tomatoes April 1-Dec. 20
- Zucchini April 21-Sept. 30

Reference prices become effective price floors during the specified periods.

Source: The CAP Monitor/Abt. Associates, 1993.

Appendix 5. Shares of Exporting Countries in EEC Imports of Fresh Vegetables, 1990.

Exporting Countries	Vegetables				
	Tomato	Cucumber	Beans	Eggplant	Sweet Peppers
	(Percentages)				
1. Israel	2.5	-	-	27.3	9.7
2. Jordon	-	1.1	1.0	3.4	3.9
3. Thailand	-	-	1.8	-	-
4. Morocco	37.5	-	8.0	9.7	5.6
5. Egypt	-	-	11.4	-	-
6. Senegal	-	-	6.1	-	-
7. Burkina Faso	-	-	12.7	-	-
8. Ethiopia	-	-	2.9	-	-
9. Namibia	-	-	-	-	13.6
10. South Africa	-	-	-	-	20.7
11. Hungary	-	-	-	-	21.7
12. Turkey	1.1	3.3	-	22.6	32.6
13. Canary Islands	57.8	93.5	2.9	19.5	23.2
14. Rest of the world	1.1	2.2	8.0	17.4	3.4

Source: Abt Associates, 1993.

Appendix 6

Roster of Individuals and Institutions Consulted during Field Work on this Study.

Commercial Farms, The Gambia

Rohit Shah, Radville Farms Ltd.
Syed Mokthara, Sifoe Farms
Anthony Blaxsell, Pamona Produce Farms Ltd.
David Mill, Pamona Produce Farms Ltd.
Mamodou Ceesay, GHE
Augustus Proni, Faraba Farms
A. A. Cessay, Tambato Farm
Pa Amadou Jallow, Yams Agricultural Enterprises Ltd.
Sering Jobe, Sinchu Farms
Dr. Peters, Farato Farms
Isatoe Jack, Hortmarc (G) Ltd.
Reynold Carrol, Jr., Hortmarc (G) Ltd.

Hotels/Restaurants

Ms. Maggie Joof, Asst. Food & Beverage Manager, Kairaba Hotel
Procurement Manager, Amies Beach Hotel
Davis, Procurement Officer, Palm Grove Hotel
Gibou Joof, Comptroller, Atlantic Hotel
Hans Kemper, Procurement Manager, Senegambia Hotel
Head Chef, Scala Restaurant, Kololi Hotel
Rudolf Wernegger, Manager, Sun Wing Hotel
Sebastian Drover, Procurement Manager, Sun Wing Hotel

Transportation

Jerry Collins, REDCOAT
Mrs. Pat Benedict, REDCOAT
Andrew Baldeh, Sabena International Airlines

NGOs, The Gambia

Maria tou Loum, Director, WISDOM
Mariana Ashcroft, Director, GWFA
Jean Françoise Legrand, VISACA

Women's Horticultural Cooperatives, The Gambia

Mrs. Binta Khan, Coordinator, Women's Horticultural Cooperative
Claes Elliot, Advisor, The Royal Norwegian Society for Rural Development

National Investment Board

Ousman S. Ceasay, Economist

Importer/Distributors in the U.K.

Keith O. Sims, Director, J.O. Sims Ltd.
Dr. David Smith, Technical Director, J.O. Sims Ltd.
Garry Carlton, Marketing Director, J.O. Sims Ltd.
Nigel L. Kirby, Director, Oakprime International Ltd.
Dr. Arvind Mehra, Financial Director, Oakprime International Ltd.

Wholesale Market, New Covent Gardens, U.K.

Arjun Singh, Singh Processing and Wholesaling of Fresh Vegetables
Michael Long, Flower Wholesaler
Sarah Smith, New Covent Garden, Information Center

Ethnic Market, U.K.

Vinod Arora, Arora Enterprises, London

Supermarkets, U.K.

Marks & Spencer, London
Sainsbury, Spalding

We also interviewed several wholesalers, retailers, kafo and osusu leaders and members, government officials, and bank officials in The Gambia.